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Forty-fifth Session, 1923-1924.*



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PAPERS READ BEFORE THE SOCIETY.

1923-1924.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C.1, on November 5th, 1923, at 8 p.m.*

I.—SCIENTIFIC OBJECTS AND COMMON-SENSE THINGS.

THE PRESIDENTIAL ADDRESS.

By T. PERCY NUNN.

THE title of this paper heralds no new problem, and about the old one I have chosen for discussion I have little fresh to say to the Society that has done me too much honour by placing me in this Chair. It is a problem that has been brilliantly debated by some of the most acute and original thinkers of our generation. The circumstance that the argument has taken place largely at these meetings and in books which have often sprung from our discussions, and have always been influenced by them, may be remembered by the Society with legitimate satisfaction, but increases the diffidence of one who knows he has not much to say. My views were first formulated in a paper read in 1906,* and expanded during that year into an academic essay. They included the doctrine of secondary qualities and physical objects which was defended more fully in papers brought before the Society in 1910 and 1916. Since 1906 my ideas have, I fear, stiffened rather than grown: all I can now do is to confront them with the later views of more capable writers as well as with more recent results of science, and inquire how far they are still tenable. The review of the present situation which is thus entailed may at least serve to bring into relief questions that still need and deserve discussion.

* *Proceedings*, 1905-6, pp. 141-182.

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The purpose of my first paper and of the book based on it was to determine the actual aim and achievements of the scientific method in the several fields of its application. Natural science, which is the only department we need consider here, is, I argued, an intellectual process directed towards nature (I use Professor Whitehead's terms with his meanings) and sets out with a two-fold object : first to make an inventory, as complete as possible, of the observable things and events that constitute the tissue of nature ; secondly (and chiefly), to make the emergence of those things and events intelligible. In other words, its aim is to achieve such intellectual control over the course of nature that from the birth of time to the crack of doom nothing in it shall have been or happened, or shall be or happen, without man's knowledge or foreknowledge and without the assent of his reason. In working towards this infinitely distant goal the biological sciences and geology have, on the whole, remained upon the plane of common-sense things and observable events where all science is born : but this is not true, or is thought not to be true, of the physical sciences. Their greatest achievement is generally held to be the discovery, behind the veil of common-sense things and observable events, of a world of "scientific objects" and unobservable events—heat, electricity, ether, atoms, electrons, &c., and their movements and interactions. These entities have always come into the scientific argument as hypotheses by means of which the behaviour of the common-sense world could be made more intelligible ; but their fruitfulness as hypotheses has invariably led sooner or later to their acceptance as facts. In time they have, at least in physics, displaced the common-sense world from the focus of scientific interest, so that observable things and events are now valued and studied less for their own sake than for the light they are believed to throw upon the constitution and behaviour of the imperceptible world behind them. Thus have come about the

“bifurcation of nature” against which Professor Whitehead protests, and the widely though vaguely held belief that the invisible physical world has a higher reality than the visible and is in some way responsible for the very existence of the visible world and the form in which it presents itself to our perceptive faculties.

To me, as to Professor Whitehead, the bifurcation of nature and the associated doubt about the reality of the common-sense world were entirely unacceptable. I was led, therefore, to inquire in detail into the characteristics and import of the entities and transactions which, in the schemes of the physicists, displace the things and events that fill the plain man's vision of nature. Ernst Mach had, half a century earlier, done the essential thing here when he propounded and applied with brilliant results his doctrine of the economy of thought. But Mach's analysis seemed a little crude and a good deal too drastic; his acid dissolved at the same time not only scientific objects but also common-sense things. In seeking to avoid such wholesale destruction I became impressed by a fact which, although perfectly familiar, had yet, I thought, received insufficient attention. It is the fact that scientific objects are always modelled after the things of common-sense and are, in truth, nothing but common-sense things stripped conceptually of any properties that happen in a given case to be irrelevant or inconvenient. In short, the typical “explanations” of physics consist in taking things and events from some context of common-sense experience and reading them into some other context for the purpose of making the second context more intelligible. Thus an atom, as Dalton conceived it, was simply a very small hard ball, surrounded, in one of his speculations, by an elastic envelope which is plainly a phantasm of india-rubber; ether was a kind of super-subtle water, having, like any other liquid, a calculable density. but as its theory developed, assuming

rather incongruously a rigidity derived from our experience of such bodies as steel ; the (idealized) properties of water expressed in the ordinary hydrodynamical equations were also ascribed, with others, to the electric fluid ; and so on. It follows that to understand the genesis of a physical theory we must often take into account the investigator's psychology as well as his logic. The facts he studies must, as Dr. Whitehead says, be patient of the interpretation he reads into them, but where alternatives are possible his choice of an interpretation will be determined largely by his familiarity with certain contexts of common-sense experience and by the intellectual fashions of the time. Thus for the followers of Newton physical hypotheses always tended to assume an astronomical form, while in the nineteenth century physicists generally sought to explain the world in terms of the behaviour of an omnipresent fluid. The most strongly marked character of present-day physics is the return to astronomical modes of thought. This may be partly because ideas connected with projectiles are so firmly established in the primordial depths of our minds. "Atomic theories are so much more comfortable to most of us than hydrodynamical theories, because they fit in so much better with the scheme we have inherited from the practical philosophers of the Stone Age."*

The clearer individuality of the projectile type of scientific objects also gives them an advantage over the fluid type ; the latter have the vagueness of Roman numina, the former the definiteness of Greek gods. Joseph Black's pupil, Thomas Thomson, could in 1810 write of "caloric" as a "simple substance," differing in nature from such simple substances as oxygen only in being "unconfined," and explained the rising temperature of heated iron as due to the combination of the

metal with increasing "doses" of it.* But the single property he could assign to caloric in isolation was quantity, and this could not be measured directly, as the quantity of a "confinable body" can be measured, but only by the changed properties of the substances with which it combined. So feeble a materiality could not long resist the evidence of experiments such as those of Rumford, who showed that heat can be produced in endless amount by friction. It is not surprising, therefore, that heat is no longer spoken of as if it were a substance, except for didactic or commercial purposes or in convenient figures of speech whose conventionality is well understood. Electricity is, perhaps, destined to suffer the same fate. In 1889 Sir Oliver Lodge could still declare that it might possibly be a form of matter,† but it has now become a scientific object about which cautious physicists say as little as they can. For instance, when Johnstone Stoney introduced the term electron he definitely intended it to mean an atom of electricity; but Sir Ernest Rutherford, though his language varies, seems to prefer to speak of it as "a mobile electrified unit," and to regard it as *carrying* rather than as *being* an electric charge.‡ In other words, the atom of electricity seems to be conceived not as an ultimate particle of Franklin's fluid, but rather as a character of another kind of ultimate scientific object.

On the other hand, the primary qualities of common-sense things are transferred without difficulty to scientific objects

* *System of Chemistry*, fourth edition, vol. i. Light is also a simple "unconfinable body"; "combustion is occasioned by the mutual action of the simple confinable bodies on each other, and the consequence of this action is the extrication of the simple unconfinable bodies" (p. 627).

† *Modern Views of Electricity*, p. 7.

‡ Presidential Address to the British Association. *The Advancement of Science*, 1923, pp. 4 et seq. For Sommerfeld, however, an electron is a "reines Elektrizitätsatom . . . von gewöhnlicher Materie unbeschwert." (*Atombau und Spectrallinien*, 3rd ed., p. 6.)

of the projectile type. Size, mass and motion belong to an electron in the same sense as they belong to a flying bullet or a planet; they are not, like the quantity of caloric, estimated in terms of the properties of other things. Their materiality thus assured, these objects have constantly increased their hold upon the scientific mind. To the majority of physicists the nucleus of an atom and its satellite electrons are now as "real" as the fountain and the omnibuses in Piccadilly Circus are to the unphilosophical *flâneur*.

Connected with this difference between the two main types of scientific objects is another of great importance. Caloric, electricity, ether, at least when they first enter into science, are not substitutes for common-sense things. Their function is sometimes to explain salient properties of things, sometimes to explain their intercourse and interactions, sometimes to discharge both these offices. Caloric, for instance, explains both the hotness of a single body and the changing temperatures of neighbouring bodies; electricity explains the curious property of rubbed amber and the behaviour of batteries; ether enables us to understand how light from the sun reaches our eyes, and so on. There is here, as I have said, no suggestion that the common-sense objects are superfluous; it is suggested merely that the course of nature involves the scientific objects also. But the projectile type of objects claim from the beginning a much more important place; they are not merely newly-found denizens of a world already known to be inhabited by common-sense things. We have not a stone *and* a congeries of molecules; the congeries of molecules *is* the stone. If molecules, like stones, had secondary qualities, this kind of identification need raise no philosophic problems. When a white patch on a distant hillside is shown by a telescope to be a flock of sheep in a fold, one recognizes without shock that the size and shape of the patch is simply the

size and shape of the flock, and that its whiteness is simply the whiteness of the sheep. But although the physicist holds that the shape and size of a lump of chalk are the shape and size of a molecular congeries, he does not hold that its whiteness is the whiteness of the molecules. *Ex hypothesi* molecules are neither coloured nor transparent; colour and transparency are to be explained in terms of their distribution and behaviour considered in relation to the distribution and behaviour of other scientific objects elsewhere. These include the tumbling of electrons from one orbit to another in distant light-giving atoms, and shivers transmitted through the ether—with the qualification that we are not very sure, nowadays, about the ether. Such a hypothesis, as we are well aware, does give rise to philosophical problems of wide-reaching scope and profound difficulty.

The central question is, of course, whether objects can exist which possess the primary qualities of common-sense things but have none of their secondary qualities. That question cannot be answered until one has reached a satisfactory theory of the common-sense thing—a task of extraordinary difficulty and complexity. I need not take you again through the arguments which led me to the view which I have adopted, provisionally, as on the whole the most satisfactory, nor need I repeat the criticisms I have ventured to direct against other doctrines. The doctrine I accepted declares that a thing is a structure embracing and actually consisting of all the “sense-data,” “sensibilia,” “sensa” or “sense-objects” which common-sense regards as appearances or qualities of the thing and which are “presented” to any percipient at any time or place. This view is based upon two facts (or what I believed, and still believe, to be facts): (1) That sense-experience contains as an integral element a direct announcement that its objects are outside and independent of the mental act; (2) that analysis can discover

in things nothing except sensa and their forms of connexion. To make the view plausible I had to confront it with the more obvious difficulties and to show how these could be met. I had, for instance, to argue that the multitude of shapes and sizes which may be presented to the same percipient or to different percipients may all belong to a thing and be equally "real." The difficulty of supposing that the plain man's mind can from this vast mass of material extract the idea of a thing possessing a single size and a single shape is now much less than it was before Professor Whitehead showed that the concepts of point and line, which every normal mind acquires without visible effort, presuppose processes comparable with this in complexity and not wholly dissimilar in character. It is wonderful, no doubt, that simple and even primitive minds should perform these feats and should, for instance, apply the method of extensive abstraction so skilfully and so much as a matter of routine that they are wholly unconscious of the operation. But anyone who is sceptical about the matter should consider the almost infinite complexity and subtlety of the nervous system, and ask himself whether the creative energy that produced that could not also achieve and mechanize the processes involved in the conception of points and the perception of things.

Again, it was necessary to show how the common notion of a thing (admittedly a rather hazy idea) must be modified and amplified so as to include all the facts.* The typical common-sense thing includes tactual as well as visual characters, and is generally regarded as occupying only the place where these

* The haziness of the ordinary concept of a thing corresponds to the complexity of the facts. The world contains not only hard, permanent, "physical objects," such as chairs and tables and trees, but also "stray smells, sounds, colours and more subtle nameless sense-objects." (Whitehead, *The Concept of Nature*, p. 156). It should, however, be understood that in this paper I confine myself to the consideration of the typical physical object mentioned here in the text.

characters co-exist. I had to argue that the hotnesses which may be felt outside the place occupied by them are also constituents of the thing.* From that position it was easy to advance to more difficult cases, such as images in a mirror or a telescope and the "straight staff bent in a pool," for it could be maintained that these were merely instances in which the visual and tactual characters of a thing happened to occupy different situations. Such explanations, I pointed out, involve a further modification of the too simple concept of common-sense; for the presence of the mirror, the lenses or the water must be thought to make the thing observed different, though the difference may (as in the first two cases) be perceptible only from certain points of view. Similar if not identical solutions of all these problems have been worked out with admirable fullness and care by Dr. Broad in his recent book.

It was a serious defect of this attempt to construct the physical world out of sensa that I could not see how to derive from them the fundamental geometrical concepts. For I felt clearly that points, lines and surfaces must in some sense be

* A brief quotation will be the best means of recalling other features of the theory that should be borne in mind:—"Not only must the thing be thought of as owning an indefinite number of hotnesses disposed spacially about it; it must also be recognized that the disposition of these hotnesses depends in part upon the hotnesses belonging at every moment to neighbouring bodies. Both of these ideas are in principle familiar to physical science as well as to metaphysics. Physical bodies are not isolated reals, each wearing its own qualities without any regard to the condition of any other body. In certain cases, capable of empirical determination, bodies reciprocally 'take note' (in Lotze's phrase) of one another's condition, and express this notice in their own states. Again, a thing must not be thought of as limited by a precise spacial boundary. It may be necessary to think of it as filling an indefinite part of the material universe. The thing need not on that account cease to be a definite real complex of primary and secondary qualities which could be conceived to be withdrawn from the universe as a whole."—*Proceedings*, 1909-10, p. 205.

constituents of the perceptual universe or else that we must admit another "bifurcation of nature" as unacceptable as the division between the worlds of common-sense and of scientific objects. Fortunately the doctrine of extensive abstraction, one of the finest things philosophy owes to Professor Whitehead's genius, has filled up the hiatus with beautiful completeness and by doing so has, I think, greatly strengthened the case for the realist view of the world.

Now although, as I have said, the theory of common-sense things just sketched seems to me on the whole the most satisfactory, I recognize that it has serious difficulties, and that there is much to be said for views, such as Professor Stout's, in which *sensa* are regarded as "presentations" based upon, but not identical with, extra-mental features of the thing. No importance need be attached here to the familiar fact that in perception one "sees" far more than is presented in the form of visual *sensa*—for example, that when one looks at a match-box the "presentation" in some way includes the back and the inside as well as the visible front.* The realist theory by no means asserts that in perception there is nothing before the mind except the *sensa* "existentially present." On the contrary, it includes the view that, by the process Professor Spearman calls reproduction and the eduction of correlates, the existential presence of a *sensum* may evoke cognition of other *sensa*, which are also constituents of the thing but are not existentially present, together with the schema of their connexion with the present *sensum* and with one another. But the theory does appear to be strained when it includes in a red book the *sensa* perceived by a colour-blind as well as those perceived by a normal person, or when the blurred *sensa* of a myopic eye and the bright streaks

* Spearman, *The Nature of Intelligence*, pp. 196-202, records some very careful introspections of this particular experience made by expert psychologists.

perceived by a half-closed one are held to be constituents of what is "really" a glowing point. The last case can, it is true, be dealt with in the way the theory deals with the bent stick, and with telescopic or microscopic vision. One may argue that the thing here is the glowing point *and* the eyelashes, and that the bright streaks are truly constituents of this artificially complicated object. In that way one avoids the admission that the streaks are constituents of the glowing point taken in isolation. But this line of argument may end in conclusions rather seriously discordant with the original aim of the theory. For instance, the blurred sensa may be explained as constituents not of the point but of a complex object formed of the point and the myopic eye-lens, and if one has admitted this, it is difficult to avoid the further admission that the normal sensa are constituents not of the point but of an object composed of the point and the normal eye-lens. Thus one may be driven to the position taken up by Professor Lloyd Morgan in *Emergent Evolution* (p. 229), namely, that colour (and presumably all sensa) "live in the whole situation," and have being only in virtue of the extrinsic relatedness of person and thing.

Now it is obvious that (as I have myself insisted elsewhere) the whole situation, including one's nervous apparatus and the condition of one's eyes, determines *what* visual sensa shall be perceived, though there is no logical contradiction in holding that all the sensa whose perception is thus conditioned are, nevertheless, constituents of the thing. On the other hand, one would, of course, gladly exclude abnormal sensa from the thing as a separate entity, and refer them to the whole situation, if this could be done without treating the normal sensa in the same way. In discussing the views of Professor Stout,* I have tried to bring

* *Proceedings*, 1915-6, pp. 167 *et seq.* Prof. Stout has restated his views in a criticism of Prof. Alexander (*Mind*, No. 124) to which the latter has replied (*Mind*, No. 125). Students of *Space, Time and Diety*

out the prime objection to the theory that *sensa* refer to, or in Dr. Lloyd Morgan's phrase are "psychical signs" of the whole situation. Briefly it is this. The function of *sensa*, as Professor Stout agrees, is to give us information about things, and there is no other source of such information. But if it is never more than an ingredient in information about the whole situation, we are eternally cut off from knowledge of the thing as it exists (if it does exist) in contexts from which perception is excluded. And the situation becomes still more unsatisfactory when one observes that the actual experience of a *sensum* contains reference to nothing except other *sensa* and their form of connexion- in short, that there is nothing except these ambiguous *sensa* out of which we may in thought construct the "passage of nature" that certainly seems to go on in our absence. For these reasons I prefer to cling to the principle that the visual *sensa* in normal perception are genuine features of the thing, and exist in the absence of the percipient mind and body provided that other essential features of the physical situation (such as the presence of light) remain unchanged. In order to exclude undesirable *sensa* without discriminating against them in an arbitrary way, it may be assumed that the eye is in fact part of the thing of which the *sensa* are constituents, but that in normal cases it contributes practically nothing to the character of the *sensa*. To justify such an assumption one may imagine a stick partly immersed in a liquid of refractive index very little different from unity. In this case the visual *sensa*, according to the theory, are actually constituents of a complex thing composed of the stick plus the liquid, but would, nevertheless, differ only insensibly from the visual *sensa* which are constituents of the stick alone. In the case of myopic or astigmatic eyes, or of eyes half-closed

will recognize that there is no substantial difference between my theory of sense-perception and the one developed in that classical exposition of modern realism.

or filled with tears, the compound nature of the thing cannot be ignored, and it must be recognized that the *sensa* perceived are not constituents of the external thing taken by itself. Nor is the distinction between the cases arbitrary, for the normal *sensa* will, as a rule, be correlated in an orderly way with tactual *sensa*, while the abnormal ones will not, and other means of discrimination, of a similar character, are accessible.

The strength of the realist theory, as compared with its rivals, is that in declaring things to consist of nothing but *sensa* and their forms of association it guarantees direct knowledge of them as they really are, for no one can doubt that he has direct knowledge of *sensa* and their forms of association. Assuming that arguments of the kind I have indicated prove it to be tenable, we may easily discover its bearing upon the question out of which this digression arose, namely, the question whether there can be things possessing only primary properties. The answer is that experience gives us no warrant for such a supposition and no help in understanding what it could really mean. Size and shape in their primary meaning are specifications of the secondary characters of particular *sensa*; it is as impossible to have a size or shape where there is no visual or tactual *sensum* as it is to have a cat's grin where there is no cat. And the same thing that applies to size and shape applies also to place. To this statement it may be objected that although upon the theory, a thing, for instance, a solid sphere, is a synthesis of *sensa* possessing an infinite range of sizes, yet the sphere is universally admitted to have, in some sense, a *definite* size. And it may be contended that the size ascribed to an electron corresponds to the size of the sphere, not to the size of a constituent *sensum*. This argument overlooks what Dr. Moore might call the Pickwickian character of the size of the sphere. The size of the sphere is not another size over and above the sizes of the *sensa*, nor a limit of their sizes, nor even the size of one of them chosen to represent the

whole series. It is the whole set of sizes of the *sensa* much in the same way as a point "which hath no parts" is, as Professor Whitehead has taught us, an infinite set of volumes, all unmistakably possessing parts. It is true that we measure the size of the sphere by a single number, declaring, for instance, that its diameter is 10 in. ; but 10 in. is not, in the primary sense of the word, a single size. What we mean is that the ends of a diameter of the sphere would be seen or felt to coincide with certain marks on a scale thrust through it : that is, that the visual and tactual *sensa* which are constituents respectively of the sphere and the scale have always a definite partial coincidence.

What has been said here about size can also be said, *mutatis mutandis*, about shape—for example, about the shape of a coin which has been so often a subject of debate at these meetings. If time permitted one could also show that the place of a body and its mass (which must be classed with its primary properties) are also characters of the visual and tactual *sensa* that belong to its constitution. In short, size, shape, place, mass, as measured by numbers, may be compared with the generalized co-ordinates of physics, which include in a single value reference to an infinite set of particulars, and the particulars to which they refer always are, and must be, specifications of the secondary characters of *sensa*.

Considerations of this kind, here developed somewhat further, led me in the 1906 paper to the conclusion that unless the characters ascribed to a scientific object, say, an electron, are references to the observable primary characters of *sensa* they are nothing at all. Common-sense things, I argued, are primary syntheses or constructions of sense data ; scientific objects are secondary syntheses or constructions of the same data. And, as I have already said, I laid great stress upon the fact that the materials worked up into the secondary constructions include not merely the *sensa* but also the forms of association which make

sensa into things. Thus, as Mr. Russell says in his brilliant little book,* electricity is not itself a thing: it is a way in which things behave. And the same must, I contended, be said about the atoms and molecules of chemistry; I should now add that it must also be said about the nuclei and electrons of the atom in modern physics.

Unless the preceding discussion is hopelessly wrong, the pretension that scientific objects are the reality of which the common-sense world is but the appearance must be entirely abandoned. Does it follow that J. J. Thomson, Rutherford and Bragg, Planck, Niels Bohr and Sommerfeld have devoted their splendid powers to nothing better than the exploration of *mare's nests*? The suggestion must be as untrue as it is offensive; all competent judges agree that their researches have made conspicuously important additions to the sum of human knowledge. The question is, What is precisely the nature of those additions? According to our theory the discoveries, however fascinating and illuminating, and however rich in potentialities of the practical order, are still only further discoveries about the ways of things in the common-sense world, and have never carried the investigators beyond it. But this is a verdict which these distinguished men would certainly not accept,† for their claim is to have established the existence and properties of *things* indubitably real, yet of an order quite different from the things of common-sense.

Is there any way in which that claim can be admitted? Professor Whitehead, whose studies in this subject‡ make one's own seem painfully crude and amateurish, thinks, unless I

* *The ABC of Atoms*, p. 32.

† "We are quite certain that the existence of the atom is no longer an hypothesis, but a verified fact."—Rutherford, *A Page of Scientific History* (*The School Science Review*, February, 1923).

‡ *The Principles of Natural Knowledge*, ch. vii; *The Concept of Nature*, ch. vii.

misunderstand him, that there is. He holds, as I do, that there are three main types of objects, which he calls respectively sense-objects, physical (*i.e.*, common-sense) objects, and scientific objects, and that they form an ascending hierarchy each presupposing the type below. But he differs from me, or at least appears to differ, in thinking that the three types have an equal right to be considered actual denizens of nature. Thus the whitish streak seen in Mr. C. T. R. Wilson's beautiful experiment is for him not only the "situation" of a line of mist, but also the situation of a moving α -particle. The characters "conveyed" by the white streak are, of course, not the same when it is viewed as mist and when it is viewed as the path of an α -particle: in the former case they are drawn from the limited context of perceptual experience of mists; in the second they are gathered by thought from a context of events which covers a very large area in nature. Nevertheless, the situation is as truly occupied by the α -particle as by the mist. Thus what the physicist discovers is not merely a formula for calculation, that is, a way in which common-sense things behave; "because formulae must refer to things in nature, and the scientific objects are the things in nature to which the formulae refer."*

Now I cling to the hope that I may have misunderstood Professor Whitehead's language, and that his view of the status of scientific objects is not seriously different from my own. In this connexion I should like to observe (I trust with his approval) that his statement, in the passage from which I have just quoted, that "the characters of the observed physical objects and sense-objects can be expressed in terms of these scientific objects," implies no assent to the common view that the behaviour of scientific objects is the reality of which our perpetual experience is the appearance. For scientific equally with physical objects presuppose sense-objects, and therefore cannot expel them from

* *The Concept of Nature*, p. 158.

the field of reality. But in spite of my desire to follow him, I feel that there is between physical and scientific objects a difference of character which makes it impossible to locate them in the same world. It is, in fact, much the same as the difference, in Macaulay's hypothetical dictionary, between "Jones, Sir William," and "Jones, Davy." I recognize how easy it is to exaggerate the difference between perceptual experience and thought, yet I own to a simple-minded prejudice which makes me value the reality of such things as chairs and tables so highly that I cannot grant to scientific objects more than a purely Pickwickian existence. And I am confirmed in that prejudice by observations upon which I have already dwelt. If scientific objects were genuine elements of the world, based upon yet additional to common-sense things, they ought, I think, to exhibit common-sense things worked up in forms not already exemplified in the ways in which common-sense things are themselves constructed from *sensa*. But, as we saw, there are no such new forms. Scientific objects, at least as men of science conceive and use them, are always modelled upon familiar types of perceptual experience. Moreover, there is, as we also saw, an element of fashion and choice, and, I now add, of mutability, in explanations by scientific objects which make it difficult to take those objects very seriously. The electric current was first regarded naively as the flow of an imperceptible fluid through the substance of the wire; a little later the facts of electrolysis required the idea of a second fluid going the other way; further discoveries suggested that the current is really a process going on everywhere in the world *except* in the wire; finally, it came back into the wire again in the form of a stream of electrons. Another kind of relevant consideration is illustrated by Mr. Russell's remark* that the quantum theory has assumed its present highly complicated form "because it has forced its way through, owing to experimental

* *ABC of Atoms*, p. 151.

evidence, in a science built upon totally different notions." Facts of these kinds strongly support the view that scientific objects are not a new order of things, but are merely common-sense things drawn, with relevant simplifications, from familiar contexts of perceptual experience and employed to make more refractory contexts intelligible. In short, a scientific object is more than a formula only because it presents a formula by means of a myth.

If Professor Whitehead has seen a way of escaping from this conclusion I would gladly follow him if I could, not only because one would naturally wish to be in the train of so surefooted a guide, but also because one would wish to accept the results of science, as far as possible, at their face value. Without question a certain simple-minded faith in scientific objects is necessary to successful investigation. It will be remembered that some time ago Wilhelm Ostwald advocated a chemistry from which atoms and molecules should be excluded; but his fellow-chemists wisely refused to follow him, and stuck to their atomic tetrahedra and molecular rings. One would be glad to believe that they were right not only because atoms and molecules are indispensable heuristic ideas, but because they are genuine constituents of the physical world. I own that, as a layman following at a long distance the present heroic adventures and discoveries of physics, I put out of my mind all that I have said in this paper and accept the wonderful tale as it is told. But when the book is set down the obstinate question returns: A wonderful tale it certainly is, but what does it really mean? And the only answer I can find is the one which I have once more tried to formulate and defend. I may summarize it by saying that the real achievement of science is not to have disclosed any reality behind the veil of sensible things, but to have greatly extended and deepened and rationalized the scheme of the world revealed in perception. It is perhaps only a sign of an unhealthy romanticism to be disappointed because it can do nothing more.

*Meeting of the Aristotelian Society at 21, Gower Street, W.C. 1,
on November 26th, 1923, at 8 P.M.*

II.—THE INCIDENCE OF MATHEMATICO-PHYSICAL SPECULATION ON PHILOSOPHY.

By J. W. SCOTT.

ONE often encounters the view among mathematicians, expressed modestly perhaps yet with the force of conviction, that the new light which they have been obtaining upon their own subject in recent years ought to make some difference to the philosopher. If it does not occasion him a drastic recasting of his theories, at least it ought to draw forth some statement of the reasons why not. The matters at issue are so central to philosophical thinking that I do not see how these alternatives are to be escaped ; and I imagine that in the philosophic ranks the number of those who take this view must be growing.

Yet it is not in the nature of the situation to be easily remedied. Roughly and in the main, it is only the mathematicians who really understand the mathematical doctrines. On the other hand, only the philosophers—and they, only when the mathematical thinkers have succeeded in getting the principle of the doctrines in question made plain to their minds—have really much chance to see how the central philosophical issues are affected thereby. Ignorance of mathematics on the one side is greatly more of a stumbling block in the way of progress, I think, than ignorance of philosophy on the other. The path of adventure, frankly undertaken from both sides, seems the only way out. And the stakes are really high ; at least for anyone whose claim to technical mathematical equipment is as slender as mine. One risks not only failure but, of course, obloquy. It

is with a full sense of this risk and sustained partly by the conviction that a little intellectual martyrdom is sometimes the only way to get light, that I propose to walk a little distance along the mathematico-philosophical border this evening, and with resolute naïvety speak about the things I see there just as I seem to see them.

I seem to feel the incidence of mathematical speculation upon philosophical questions especially forcefully at two places--the theory of the infinite and the theory of appearances and their relation to reality. The former seems affected by mathematical discussion of the nature of infinity and the latter by the theories of relativity. I am so insecure in both terrains that it seems indifferent upon which I adventure first. I shall try the theory of infinity or the infinite.

Reading Mr. Russell's writings, one often takes the impression that "the impossibility of infinity" is a doctrine held by certain of the philosophers; that it has even been made into a cardinal conviction by them; and that if we take proper account of certain advances in mathematical theory we shall find that there are no real grounds for their opinion.

The remark is intended to apply, apparently, to any philosopher whose views are of the general idealistic type. It will be in accordance with my plan if I simply set down here how I have understood the new principle introduced by mathematicians into discussions of this subject, in the hope that it may appear of itself why this particular piece of Mr. Russell's teaching has always seemed to me so peculiarly wrong and perverse.

I must indicate to begin with that, as I see the matter, it is not quite true to say in regard to infinity that philosophers and mathematicians are engaged upon wholly different problems. There is a significant way of saying that the problem is the same

in both cases. It seems to me perfectly true to say that we have a naïve conception of the infinite; and that both philosophers and mathematicians have been asking how we are really to make sense of it. This is the common problem. I think, for example, that we could take this question to Galileo, and that we could also take it to Kant. We should find both of them engaged upon it.

Moreover, we could extract an answer from each of them which to a certain extent would be the same. We should obtain from both an answer to the effect that our understandings cannot make this conception coherent or consistent; Kant declaring that we can prove with equal cogency, *e.g.*, about space or time both that it must be and that it cannot be infinite; and Galileo pointing out concerning our conception of an infinite number, that this is the conception of a number such that the number of numbers making it up is the same as the number of numbers making up a contained part of it. There are far fewer squares, he would point out, than there are numbers, yet every number has its square; which is to him a contradiction.

But we should find that in Kant's case there is something more to say. This verdict of antinomy is not his last word. The incomprehensible infinite is for him still something; something we are only getting thus into antinomies by trying to apprehend through means not suited to its nature; it is to him something which we can still apprehend, but only by striking an entirely different attitude, the practical attitude. One main problem Kant left for later philosophy was the reduction of this positive apprehension of the infinite, in which he believed, to intelligible shape. And it is between the sort of intelligibility achieved in the idealistic effort to develop this side of Kant, and the sort of intelligibility achieved by mathematical theory of the infinite that the real parallel lies between the philosopher and the mathe-

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matician, or the real contrast. What, then has been made of the conception ?

Strictly intelligible I am prepared to think the conception has perhaps never been made. I am speaking now of the philosophic effort. But what strikes me is the similarity of the lines along which light has been sought by the philosopher to the lines along which, so far as I am able to apprehend it, the mathematical light on the conception has come.

Mr. Russell is convinced that if you can make sense of "an infinite number," then continuity—that continuity which, in the course of our ordinary experience we can see and feel, in such things as space and motion—is no longer impossible or unintelligible. Incidentally, too, he thinks that when we succeed in making "an infinite number" intelligible, we vindicate the sense world against many attacks on it which depend on the contradictoriness of this conception for their validity. I am thinking here of *Our Knowledge of the External World*. To put his thought in another way : we may continue to call space and time infinite if we make sure that in saying so we are ascribing to them the true infinity, the one which the development of Cantor's and Frege's mathematical views has led to.

Now the interest of the question—Just what is that sort of infinity which space and time really have ? lies chiefly in the circumstance that idealism might use those very words about them ; it too might say, most naturally, that the "infinity" which the ordinary mind sees in space and time is only to be withheld from them and refused to them if understood in a false way. When the ordinary man looks out to the horizon and reflects on this infinite universe the idealistic philosopher, like the mathematician, does not contradict him but only cautions him. "Yes," he says, "this universe is infinite, but only if you do not think of the infinite in a certain crude and impossible way, in which it is yet very natural to think of it." That is why I am interested

to know that mathematically also there is a false way of it and a true. For it is not wrong in either philosopher or mathematician to attempt to help the naïve mind to say what it is after in its first crude apprehension of infinity; or to show it what thought—meaning what thought that it can carry out—to substitute for its first crude notion of something merely on and on for ever. Nor does either of them require to condemn the sense world as unreal because it cannot just literally have the infinity which the naïve mind thus ascribes to it. It is necessary to remind ourselves of both of these things when reading Mr. Russell because he speaks so often as if idealists had deliberately meant to reduce the world of sense to illusion, and because he objects so strongly to philosophers for having had something which they called the “ true ” infinite. It is not to be denied that they have spoken in such a fashion perhaps even “ impertinently ” sometimes, as he suggests. But it could only be really impertinent if it implied an opposition to the use of the current mathematical conception within the sphere of mathematics; which, however, it did not need to imply. The real opposition was to the naïve view. And I cannot see but that it is to the very same naïve view, within mathematics, that the mathematician himself now objects. I am not able to distinguish the object of the philosopher’s criticism in this matter from the object of the mathematician’s own. They both criticize, as it seems to me, the same person, the naïve person.

And when we ask about the criticism advanced, it appears to me to be either the same or very like. But before I can make out this, I must take courage to state as simply as I can what I have been able to take out of the mathematical account; leaving it to others to say whether and how far what I have understood of that, is mistaken in principle.

Russell, if I follow him, arrives at a finding in the matter of infinity by combining the speculations regarding infinite numbers promulgated by Cantor, with Frege's definition of a number. From Frege he derives the view that number is applicable to classes, that two classes have the same number of terms in them when there is a one-one relation between all the terms of the one collection and all the terms of the other severally. If each one here can be paired off with one from over there, none used twice and none remaining over, then there are the same number here as there. If from two rows of counters I can take off successive pairs and have none over, there are the same number in the two rows. The meaning of "three" if I have a class of three, is what this class has in common with all classes "similar" to it, in the sense of having a member for each of this one's members.

Cardinal to a tenable theory of infinity, I take it, is this notion of similarity ; and in somewhat the following way.

In the light of this definition of number, we can hold to the view that infinite numbers really are numbers, and see the conditions on which we may have it so ; and we can inquire after that whether to assume these conditions is mathematically acceptable or at all mathematically valuable. Now into the question of their acceptability or value for mathematical purposes, I am wholly incompetent to enter. But philosophically speaking, those conditions, when we get them, do appear to me to be entirely acceptable and entirely valuable.

What are those conditions ? The crucial point is the one which Galileo apparently found it impossible to accept.

If we have a collection with an infinite number of terms in it, then whatever other infinite collection we care to take, we can produce a member of this one to match every member of that, as far as we care to go. This, however, though it means that each collection has the same number in it, does not appear to

mean that infinite collection A *cannot be any greater* than infinite collection B. It can be greater. For B may be only a part of A and yet produce a member for every member of A. Thus the infinite collection of numbers is greater than the infinite collection of squares; since the square numbers are only some of the numbers, as Galileo pointed out. Yet you can match every natural number with a square, however far you care to proceed with the list. This may seem at first glance a contradiction. But it is not. And it pays the mathematician to assume that it is a truth. Now my point is that this truth is something which seems very like what the philosopher has thought paid him to accept too.

If I ask the mathematician what, speaking quite formally, infinity is, it would seem I need not be surprised if he began his answer to me in some such way as the following:—"If there is anything which I am to regard as infinite, then the infinity of it consists at least in this; that a certain relation between the whole and its parts obtains in it."

If such a statement is not sheer caricature, then I cannot think it to be without significance that I am here again stumbling upon a form of words which is familiar; for a certain relation between a whole and its parts is precisely what I can most easily conceive a philosopher looking to, when the quality of infinity as he understands it, is to be ascribed to the whole—as Hegel, for example, ascribes infinity to those wholes which we call works of art.

And when I go on to obtain the nearer determination of this relation from the mathematician; when I find that an infinite collection is one of which the parts are "similar" to itself or "equivalent" to itself, it seems a very small step indeed from saying that to saying, in the language of the philosopher, that the infinite is the self-contained, or that it is that whose parts, while not just literally itself over again, are yet in some way repetitions

of itself. I do not say that the philosopher has made this conception definitely intelligible. But it seems to me that the mathematician is coming upon a conception uncommonly like his, and in its mathematical application at least is rendering it intelligible.

Moreover, noting that both mathematician and philosopher are building up a conception of infinity in opposition to another or others which they think unsound, I cannot but be struck with what seems to me the practically complete identity between the main misconception which the mathematician is tilting at, and one of the main false views by opposition to which idealistic criticism has evolved its position.

Idealistic philosophy is driven upon its own conception of the self-contained by the force of contradictions which Kant had taught it to feel. Endeavouring to articulate the "practical" apprehension of the infinite above alluded to, which he bequeathed to it, it accepts from him the presumption that there is something or other to be reached and formulated, in which certain contradictions which he had found in infinite number would be resolved ; difficulties, I do not say which *were* there, but which he had found there, and which are somewhere. Kant comes up against the matter in course of discussing the alleged infinity of space and time. He may have made difficulties about infinite space and time which they do not involve. But his root difficulty is just where Mr. Russell represents him as having found it ; namely, in the impossibility of an eternity having already elapsed ; the impossibility that at this present moment "an infinite series of successive states of things in the world has passed by." For, he says, "the infinity of a series consists just in this, that it can never be completed by successive synthesis." Now, it is hardly to the point for Mr. Russell to urge here "But the infinity of a series just does *not* consist in that." What matters about Kant's

position, to those who have tried to develop it, is that infinity is impossible if it consists in that; that is to say, in something to be reached by endless counting. The infinite of naïve experience, that infinite which we see in the blue of the sky or hear in the murmur of the ocean, which gives us to think of something ever vaster and more vast, that which we feel when we think of the vista of time stretching, as we say, "infinitely" behind and before us, all this is but the confused intuitive apprehension of something real; but something which in itself is not literally of this sort—which is not the mere "on and on" of a line which starts from us, not the mere endless duplication of something which starts from this sound we hear or this span of space we see, or from any other piece of finitude which our minds grasp and proceeds out and out endlessly. Idealistic philosophy is interested in pointing out this mistake; as it is interested in pointing out the complementary one of the thing-in-itself. But idealistic philosophy has no interest in opposing mathematical speculation except in so far as this is the conception of infinity which it adopts. This is what idealism has criticized. And I cannot see but that it is just what recent mathematics is criticizing too.

I do not urge so much the similarity of what the two lines of thought put in the place of this false infinity: though I am repeatedly impressed by it. I do not doubt that the "true" infinite of the mathematician and the "true" infinite of the philosopher differ. Mathematics and philosophy differ in their subject-matter. All I note is the remarkable resemblance of the general place, if one may so speak, in which the quality of infinity is found, in the two cases; and of the language in which it is described. Self-containedness, in a definite mathematical sense, is what appears to be given as the character of infinity from the mathematical side; and self-containedness—in a sense not more dissimilar I think than the subject-matter it deals with warrants

and requires—is what idealistic philosophy has meant in ascribing infinity to the ultimate cosmic whole of things.

In what remains of my paper I am on ground on which I think I feel even less confidence, if possible, than in the foregoing. And the gravity of my situation is only increased by the fact that if, besides not reaching far—which though a highly inconvenient circumstance, may not perhaps be fatal—my limited apprehension of relativity is also fundamentally wrong in principle, there can remain no value at all in anything I have to say. I merely wish to put it on record that if I have not misapprehended the principle, then one place where the theory touches us as philosophers is in regard to the theory of appearances and their relation to reality. There are doubtless others—for example, how far the apparent overwhelming vastness of the universe as compared with ourselves is anything genuine. But the one point is all that will occupy me here.

And I must begin by taking all the risk of being quite naïve about a brilliant illustration which found its way into the discussions on the subject at the Congress at Durham this year.

I think it is Dr. Whitehead who says somewhere that the theory of relativity does not enable one to juggle with events. Something of this must surely be implied when it is said about a traveller on a projectile, who was shot out from the earth at a speed less by one thousandth than the speed of light and who kept up his rate of movement, that if he returned after two years by his own perfect clock he would find the earth aged by 200 years. If the earth has aged so much, then clearly he has been two hundred years away; and in the ordinary sense of the term *really*, his clock has *really* done the full number of revolutions required to mark that time; or else it has lost time and was not a perfect clock. This is the naïve view. To adopt,

it doubtless is a bad beginning; but I see no other way of beginning; since the relativity in which I am seeing philosophical importance must never require us to believe contradictory things of that sort. I rather think Mr. Nordmann's brilliant book can be found doing the same thing—speaking of two rays of light starting out towards the eye at different speeds and reaching the eye at the same speed without changing their speeds. That I will not press. But I must repeat, the relativity of which I am thinking would have to be one which does not carry contradictions of this kind with it.

A contradiction, of course, is one thing; and a surprising assumption is another. That a perfect clock should lose time is a contradiction. But that no possible clock could be so perfect as not to lose time—relatively, say, to the revolutions of the earth—when it is moved relatively to the earth; and similarly, that with movement apparently rigid rods should shrink in size relatively to those which are not moved; are only surprising assumptions. However, I am not clear that the relativity which requires even these things to happen, however physically interesting, is so philosophically interesting as a relativity which did not. What seems to have real points of incidence upon the concerns of philosophy is the relativity which should dispense with these things. And in case, as is more than possible, I am making some error, I may be permitted to state this relativity as I see it; and read the illustration of the travelling projectile in the light of it. My idea is that even the errors, if they are present, may be of service; or rather, that they are the only things that are of much real service.

To begin then quite frankly with difficulties. I am never able quite to understand the language about the law of the composition of velocities ceasing to hold. I am not clear how the law can hold when one is estimating say the velocity of a bullet

relatively to a train moving in the same direction and yet cease to hold when one substitutes a beam of light for the bullet. I seem driven back to matters of appearance always. I can see how the speed at which light overtakes the moving body *seems* the same both to the passenger on the moving body and to the spectator standing by. In other words, assuming that the law of composition of velocities does hold I can see how it must necessarily *seem* not to, in certain circumstances. But only provided I assume that it really is holding all the time. If I refuse to assume that, I do not seem to have any *pou sto*. The whole matter persistently reminds me of varying perspective views of the same unchanging object. . 111932.

Dropping the question whether it is appearance or reality for the moment, let me try to express as I see them the reasons why a beam of light is said to pass over the surface of a body always at the full speed of about 186,000 miles per second no matter though the body itself, relatively to the same frame of reference, were moving at, say, half that speed and in the same direction.

One may say (*a*) that relatively to this frame of reference, the body contracts and the clocks moving with it lose time ; or one may say (*b*) that to the spectator within the frame of reference the body *seems* to contract, and to the passenger his clock *is as if* it were slow. The latter explanation is clearly simpler than the former if it can be held. And it seems tenable.

Take first the spectator, and assume the composition of velocities. At the instant when the middle of the body is passing him, its motion, having the effect of retarding the ray coming to him from the front and accelerating that from the rear will ensure that before the former has had time to reach his eye, the latter has already arrived. The one from the rear *which synchronizes* with this ray from in front will be one which left not at the instant when the rear and the front were exactly equidistant from him, but a little later ; when the rear had come up towards

him and was a little nearer him than the front had been at the moment when the front ray left it. The body is thus seen to stretch over a space on the observer's frame of reference which is really less than the space it occupies when at rest. It appears as if shrunk. And the apparent shrinkage (of the body and everything on it) is just sufficient, supposing a length of 186,000 miles to have been marked along it when it was stationary, to allow the beam of light, despite the body's motion, to cover the distance in a second. (For simplicity's sake, I am pre-supposing a travelling-car of fantastic proportions.)

When we consider the passenger on the body (again assuming the composition of velocities), the behaviour of light again accounts for an *apparent* slowing of his clock, which lengthens the second so that the light can now travel the (to him unshortened) distance of 186,000 miles. The traveller may be supposed to be facing in the direction in which he is going and to be looking up at a clock face which hangs in front of him. We have to remember that he and the body and it are all tied together and racing in front of the light. They are only not going quite fast enough to keep up with it. The rays thus are overtaking him and his clock; but are striking the clock face and being reflected back to his eye at a slower rate than if all were standing still in the current. Hence he sees the clock slow. Although the marked length of 186,000 miles is not shortened for him his clock allows the light one of its own slow seconds to cover the distance, and it does it. The reason why he can never see light pass over the body to which he is fixed at a less rate than 186,000 miles per second, however the body is moving, is that a second to him is just whatever time light takes to get over that distance.

Returning now to the traveller on the projectile. Let there be two perfect clocks each having two hundred spaces on the dial,

each space marking a year instead of an hour. When the travelling one comes back after 200 years they will both be pointing at exactly the same place.

But what appearances were they, which were playing over the face of the travelling one as it receded from the earth,—as read from the earth? Suppose it keeps its face to the earth as it recedes. Suppose I can keep reading it all the time by the beams of a miraculously powerful flashlight that I hold in my hand. From the moment when it is shot out, I will commence to see it slow relatively to the earth clock. If when it rounds the star, it still does not face about, but comes back to the earth still facing the star; and if I still continue to read it by the light of my torch (by means of its reflection, let us say, in a mirror situated on the star) then, when it gets back to earth, if I look in the mirror (in other words, if I look at the clock along the whole route it has gone and come) I shall see only two years' time recorded. But looking straight at it, I shall see two hundred, as on the other clock.

Taking it, then, that all these varying lengths, varying shapes, and varying accelerations and retardations of clocks are only appearances, appearances which are detected as appearances by contrast with something assumed to be the reality, where does any philosophic question arise? It arises when you see that the reality is only an arbitrary assumption. It does not seem to me that any question arises which ordinary variations of perspective do not also present, until a further and crucial step is taken; a step, however, which the theory of relativity explicitly does take; namely, that of regarding no one of these appearances as having any better title to be called reality than another.

We have spoken hitherto as if there were a reality—a reality, in the case of the clocks, revealed when I looked straight at them; and as if it were contrasted with other things called appearances—appearances revealed, in the case of the clocks, when I read them

through the mirror on the star. What happens when the doctrine of relativity compels us to regard any one of these appearances as quite as clearly entitled to be called reality as the other? What is to result, in other words, when we are compelled to regard appearances themselves as all the reality there is? Such is one philosophical question at least, which, as far as I have at present been able to see, emerges upon us in the wake of the theory of relativity.

It reduces itself, really, to a very simple-minded question. Which of the two clocks, or rather which of the two readings of the same clock, is right? Or which of the innumerable readings which can be taken? What time of day really is it? If, instead of the clock, I saw the earth itself reflected in the mirror in the sky, I should see the earth of two hundred years ago. I should see stage coaches and men in powdered wigs; and that reading would be as correct as the other. Are the dead really dead, then? Are the living really born? Is the stone age really past, or is there no such thing as a past? As to size and shape; every yard stick has an infinity of different lengths; every brick an infinity of shapes; each one quite as much entitled to be called real as the other. The question again is the simple-minded one as to what the shapes and sizes are which things really have? Or whether apart from us there is any such thing as shape and size?

I think we are bound in any case to say that all the appearances are real rather than that none are. And then we are bound to enter upon the question how such appearances are combined into what we call realities.

I do not know how far the analogy with perspectives, which I suggested at the beginning, may take us. But with shapes seen in perspective, as I have tried to argue elsewhere, there is always one shape and size whose outlines encompass and include the others as the object is turned round before the eye. And that

inclusive view sometimes gives what we call the real shape of the thing. The real shape is in these cases the summing-up of all the apparent shapes together. Of the infinite variations of apparent size due to distance, the real one is that central one which can be taken as the organized totality of all the possible others. I am not sure that the problem of appearance and reality is quite the same raised by the facts of perspective and by the facts of relativity. The theory of relativity has in a dramatic way brought differences of time into the same situation as spatial differences, and raises the question how far we are to regard anything as really past. But there is clearly some close relation between the two.

In any case it would seem easier, if one appearance is as real as another, to say that all are real than that none are. And in that case the difference of appearance and reality would either have to disappear—which hardly seems logically possible—or it would have to turn into some distinction between whole and part. But if so it would have to be an infinite whole and part. Because in every “thing” there clearly is an infinitude of aspects.

And this brings me to the last matter I should like to communicate with respect to the two themes I have ventured upon, the new intelligibility found in the notion of infinity and the fresh poignancy given to the problem of appearance and reality by the development of the theory of relativity. I should like to suggest what, if anything, it seems to me, these two themes have to do with one another. They ought to do something to render the notion of the summation of appearances into reality (or of the inherence of differentiations in a sensum) intelligible.

In a paper before this Society a good many years ago I tried in what I fear was a very amateurish way, along the lines now so much in vogue, to make my own *Durchbruch* to a philosophy

of perception. Writing in total and wholly culpable ignorance of the work already done in the field, I found, in my own somewhat lonely effort at summing up appearances into reality, the difficulty that, setting out to try to explain the unity of the "thing," I could not get along without pre-supposing the unity I had set out to explain; namely, *organic* unity. Beginning with the effort to explain this by the summing up of appearances, I had to end with explaining the summation of appearances, as that summation stood achieved in most "things," by *this*. Perspectives would sum into a container. But other appearances would only sum into an *organic* container. That is the simplest and most obvious criticism that I seem now to be able to pass on my own attempt.* Not, as I need not say, its only difficulty; but the one *par excellence* which I fear would not be alleviated, as I think many of the other impossibilities with which the paper teems might be, by dint of resolutely going to school to the now numerous masters in this field. Any attempt to render the real "thing" in terms of its appearances *in toto*—or, in Mr. Russell's words, as "a class of correlated aspects,† seems to me to need this conception of organic unity or organized totality. In order to get a "class" read as a "thing," and equally in order to get a plurality of differentiations read as a *sensum*,‡ one must, it seems to me, get organization into the collection or the class. The latter notion therefore must be originally intelligible. And I wonder whether the re-reading of the notion of infinity has not done something towards getting intelligibility into it, in the only way in which that can be done for ultimate conceptions, namely, by showing its virtue in making other things intelligible. I am not sure—and the surmise, I fancy, shines through all the first part of this

* *Proceedings of the Aristotelian Society*, 1915-16, pp. 63 ff.

† *Our Knowledge of the External World*, p. 213 note.

‡ The reference is to Prof. Broad's *Scientific Thought*, pp. 243 ff.

paper—that it is not this idea which in the last resort is being used by the mathematician to relieve the ordinary notion of infinity of its contradictoriness. Two things seem to me fairly clear in any case. First, that the unity either of a thing or of a sensum is the unity of an infinitude ; and, secondly, that an infinitude is something in some sense self-contained. As to the intelligibility of this last phrase, I simply note the fact that the infinite has seemed to become intelligible by being read as the self-containing. This would seem to imply that the latter notion is, as I think it is, an originally intelligible notion.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C.1, on December 3rd, 1923, at 8 P.M.*

III.—ON CERTAIN ASPECTS OF SCIENTIFIC THOUGHT.

By DOROTHY WRINCH.

THE "present heroic adventures and discoveries of Physics," to use our President's happy phrase, give much material to the student of scientific thought. Stupendous progress has been made during the last fifty years. On this occasion, we attempt to deal with certain aspects of scientific thought, which have proved to be of fundamental importance in Physics at the present time.

Science at the outset is concerned with the discovery of facts about the external world by means of experiment and observation. These facts are subsequently arranged in groups and by means of probability inference general propositions are suggested for consideration. The second stage in science opens with the statement of these general propositions about physical concepts. A physical concept, refined so as to be significant in science, is a short-hand way of referring to a class of properties. Our field, therefore, at this stage of science, is the body of the general propositions which cover the facts of experience and the general problem is the problem of the relations between properties. On this occasion, we leave on one side any discussion of the characteristics of scientific thought associated with the earlier stage of science and attempt only to draw attention to certain important principles of procedure characteristic of scientific thought in its conceptional stage.

Postulates of Irrelevance.

In discussing the general problem of the relations between properties ϕ and ψ , we are first concerned with the possibility

that ϕ and ψ may be irrelevant to each other. Thus, in elementary physics, when the relation between the rise in temperature and the expansion of a bar of copper is under investigation, in superposing on the facts yielded by the experiments, a statement of the existence of a coefficient of expansion of copper, we put aside as irrelevant to our results numberless other facts. We take the time of day at which the experiments are performed to be irrelevant, we assume that the year in which they are carried out is of no consequence, and that the position of the laboratory does not affect the readings. We make, in fact, a series of postulates. The procedure adopted in practical work when general propositions are being built up from facts of experiment and observation is to assume, wherever possible, that properties are irrelevant to each other.

Many important scientific hypotheses may be grouped together as Irrelevance Postulates in the sense that each of them embodies an assumption that certain properties are irrelevant to each other. Thus, for example, in the Quantum Theory, there is an important hypothesis to the effect that the energy of a bundle of radiation given off by an atom of matter to the aether divided by the frequency with which it manifests itself to the spectroscope is always an integral multiple of a universal constant h . This "constant of nature" evidently has the dimensions of an action or an angular momentum. The assumption states that this ratio h has the same value, irrespective of all physical and chemical properties of the matter which emits the radiation. In the same way, it is assumed that radiation is taken up by matter from the aether in bundles in which the ratio of energy to frequency is entirely independent of any property of the matter. Then, again, we may consider other constants of nature which have been suggested, such as the charge carried by an electron the velocity of light, and the universal constant of gravitation. Each corresponds to a postulate of irrelevance.

On a critical examination of the theory of relativity, it appears that the fundamental postulates also fall into the class of Postulates of Irrelevance. The form of these postulates merits special attention, in view of the striking advances which have followed their introduction into physics. As they are based on certain invariances, they may conveniently be called Postulates of Invariance.

Postulates of Invariance.

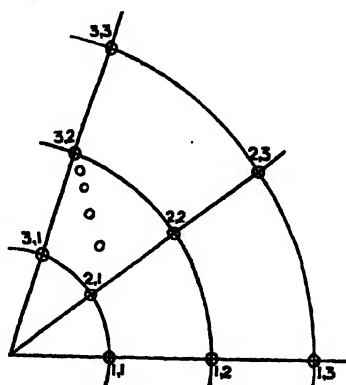
The section of the science of mensuration which deals with measurement by means of the juxtaposition of rigid bodies is well understood. In his work on mechanics, Einstein is, however, concerned with the more complicated branch of mensuration, in which the body to be measured is in motion relative to the rigid body to which the measurements are referred. It is quite clear that nothing in the older theory of mensuration which deals with measurements by means of bodies not in relative motion can yield results in the new theory of mensuration of one body by means of another when the two are in motion relative to one another, except in so far as the new theory must be consistent with the old, so that the new theory gives the old theory as a particular case when the relative motion vanishes. Some new postulate is required. The assumption made by Einstein in the restricted principle of relativity is very interesting in its logical structure. We suppose that $K_1 K_2 K_3 K_4 \dots$ form a set of rectangular axes, such that any one set relative to any other set possesses a uniform translational velocity. Then the assumption is that every law of nature can be expressed in some form which is equally valid whichever of the particular axes be the one with reference to which it is formulated. Einstein indeed may be said to assume that any one of a certain set of axes is equally suitable for the description of the external world. The plausibility of this

assumption cannot be denied. If one set of axes has in some sense a privileged position over the others for the description of natural phenomena, which is the set in question, and why is it in a privileged position? This principle of the invariance of the laws of nature with respect to a set of axes which are related by the fact that any one of them is in uniform translational motion with respect to any other of the set, together with certain assumptions of an abstract character ensuring the symmetry of the analysis is a sufficient foundation of the new type of mensuration which is the subject matter of the restricted theory of relativity.

Now, if it is plausible to suppose that the laws of nature are invariant with respect to any set of rectangular axes which are such that any one is in uniform translational motion relative to any other member of the system, the question arises as to whether it would not be plausible to suppose a similar invariance about sets of axes specified in a more general way. What, in fact, can be the special virtue of a uniform translational velocity? And why are co-ordinates which are rectangular in any sense more suitable for the description of nature than other co-ordinates, such as, for example, spherical polar co-ordinates? These considerations suggest a postulate of irrelevance of a still more radical kind, namely, the assumption that the laws of nature are invariant with respect to systems of co-ordinates which satisfy certain very general conditions. The systems of co-ordinates about which the postulate of invariance is made in the generalized theory of relativity are called Gaussian systems.

It is worth while to give a short description of Gaussian systems of co-ordinates, for their geometrical characteristics provide a simple and yet important example of the application of abstract properties to the description of the external world, and show the degree of comprehensiveness attained by a really powerful postulate of irrelevance.

There are two characteristics of a set of co-ordinates, the possession of which is necessary if the set is to be a Gaussian set. We imagine for a moment, in order to make the idea of a Gaussian set perfectly plain, a laboratory in which a large number of minute seeds have been set in tiny bowls for seed testing purposes. Suppose that the laboratory is circular and that all the seeds are placed at one level. Then one possible arrangement is in circles as in the diagram.



Now in order to refer to the seeds individually, it will be convenient to give the various seeds indices. Suppose that the seeds are each given a pair of numbers, one denoting the particular circle on which the seed lies and the other denoting the particular ray on which it lies. If it is necessary to introduce further seeds in positions intermediate between the original seeds, it will plainly be convenient to adopt the principle that a seed intermediate between certain other seeds must be given indices which are intermediate between the indices of these seeds. In fact, we may more conveniently express the principle by saying that neighbouring seeds must be given neighbouring indices. Thus, to a sequence of seeds between the points (2, 1) and (3, 2) we may give indices such as

$$(2\frac{1}{2}, 1\frac{1}{4}) \quad (2\frac{3}{4}, 1\frac{3}{4}) \quad (2\frac{1}{4}, 1\frac{1}{2})$$

and by taking seeds sufficiently near the seed with indices $(3, 2)$ we may then reach a seed with the indices $(2-\delta, 3-\eta)$, where the numbers δ and η are as small as we like, if the number of seeds is sufficiently great. Thus, our system of measurement is such that neighbouring seeds have neighbouring indices. Now, this characteristic is one of the characteristics of a Gaussian set. It has been explained with reference to the numbering of the seeds, which are arranged on a plane, but we may easily extend the idea of neighbouring seeds being given neighbouring numbers to the arrangement of seeds in a laboratory when there are shelves at different heights. In such a case each seed will evidently require three numbers to specify it completely. This fact brings to our notice the second characteristic of a Gaussian set. A Gaussian set gives to each point a number of indices which is equal to the number of dimensions of the set of points in question. Our original arrangement of seeds on one shelf gives an example of a set of points in two dimensions and each seed, as we remarked, had two indices. If the seeds are placed on various shelves there are three dimensions and therefore to each seed correspond three numbers. These two characteristics define a Gaussian set or a Gaussian system, so that any system of co-ordinates which attributes to each point a number of co-ordinates equal to the number of dimensions, and which are so arranged that neighbouring points have neighbouring co-ordinates, is a Gaussian system.

Now, the generalized principle of Relativity asserts an invariance postulate with respect to all Gaussian systems of co-ordinates. Thus, it asserts that laws of nature can be expressed in forms which are invariant for all systems of Gaussian co-ordinates. It is well known that this generalization of the postulate of the restricted principle of Relativity has led to important consequences which we need not discuss on this occasion. We wish only to draw attention to the fact that these advances have been brought about by pressing to their logical

conclusion the particular postulates of irrelevance on which the restricted principle was based. The tremendous success of the theory of relativity is sufficient to show the vital importance for scientific thought of these particular postulates of irrelevance, which are concerned with geometrical invariances.

The law of Stationary Action* in mechanics provides a further example of an Invariance Postulate. This principle was formulated by Maupertuis at the beginning of the eighteenth century, and was subsequently developed by Lagrange and Jacobi. The "action of a single particle" in passing from one position to another is defined as the space integral of the momentum, and the "action of a dynamical system" as the sum of the actions of its constituent particles. According to the hypothesis of Stationary Action, in the free motion of a conservative system between any two specific configurations, the action has the same value for all paths which deviate only slightly from the free path. The action is, in fact, invariant for the free path and neighbouring paths.†

We have considered widely different types of assumptions which may yet be grouped together as Postulates of Irrelevance. It is a significant fact that the great advances brought about by the theory of Relativity are directly traceable to the introduction of a special type of Irrelevance Postulate, which we have called Invariance Postulates. It may be the case that further great advances in scientific thought will come from other postulates of invariance. We have referred to the introduction of certain constants of nature into physics: we have mentioned the charge carried by an electron and the velocity of light among others. It seems plausible to suppose that at some future date these statements will be superseded by invariance postulates. The

* *Vide H. Lamb, Higher Mechanics (1920) p. 254 et seq.*

† The principle was formerly called the Principle of Least Action. The phrase "Stationary Action," used by Lamb indicates more accurately what is established. It is not invariably the case that the action in the free path between two configurations is a minimum.

considerable number of constants of nature which figure in mathematical physics is strangely symptomatic of some further invariances, which, after the manner of those used by writers on Relativity, would provide a means of linking together facts about the external world at present covered only by propositions about the existence of these various constants of nature. The existence of the gravitational constant has been brought into a general scheme by Einstein. We now need further invariances which will cover the remarkable induction from experience which relates to the existence of a characteristic charge associated with an electron and other similar inductions.

Laws of Combination.

In scientific theorizing we deal with concepts only in so far as they are defined by groups of properties. The laws according to which these various properties combine are, therefore, of prime importance. They exhibit a great variety of forms. We may cite a number of simple instances occurring in various branches of science.

It is a well-known fact that when two plates of different substances, such as zinc, copper or brass are placed nearly in contact, there is a difference of electrical potential between the two plates. The existence of this "contact potential" has not yet been finally explained, but an important clue is provided by the law of combination which these contact potentials appear to follow. Thus, if we take a plate of zinc and a plate of copper and a plate of brass and measure the contact potential between the plates two by two, we find that the contact potential for copper and brass is equal (within the limits of experimental error) to the contact potential for copper and zinc plus the contact potential for zinc and brass. Thus, by induction from a number of experiments, we obtain the proposition that if C_{12} is the contact potential for substances (1) and (2) and C_{23} the contact potential for substances (2) and (3), then C_{13} , the contact potential for the

substances (1) and (3) is the sum of C_{12} and C_{23} . Thus we get what may be called the "law of combination" for contact potentials in the form $C_{12} + C_{23} = C_{13}$, and the contact potentials may be said to combine according to the additive law.

A second example of a law of combination may be taken from the phenomena of the surface tension of liquids. Suppose that a liquid L_1 has the surface tension T_1 when it is in contact with the air and that a second liquid L_2 has the surface tension T_{21} when in contact with the first liquid. Then the question arises as to the surface tension T_2 when the second liquid L_2 is in contact with the air. We assume that the liquids do not mix. The theory of Laplace and Rayleigh gives the relation between the surface tensions in the form

$$\sqrt{T_2} = \sqrt{T_1} + \sqrt{T_{12}}$$

The theory of probability gives another important example of a law of combination. The postulates from which the law of combination is deducible may be taken in the following form : —

- 1 To each combination of proposition and data corresponds one and only one number.
- 2 If in one case the proposition is more probable relative to the data than in the other, the number corresponding to the first is greater than that corresponding to the second.
- 3 If two propositions referred to the same data are mutually exclusive, the number corresponding to the proposition that one of them is true is equal to the sum of those corresponding to the two original propositions.
- 4 The greatest and least numbers correspond to those combinations and only those in which the data imply that the proposition is true or false respectively.*

* The postulates are taken from a paper by H. Jeffreys and the present writer in the *Philosophical Magazine*, December, 1919.

The concept in question is that of "the probability of a proposition p with respect to certain data h ." We may write this in the form $P(p : h)$. The third postulate, which may be written in the form

$$P(p \text{ or } q : h) = P(p : h) + P(q : h),$$

relating only to mutually exclusive propositions, does not as it stands constitute a law of combination of probabilities. A law of combination can, however, be deduced from it in the form

$$P(p : h) + P(q : h) = P(p \text{ or } q : h) + P(p \text{ and } q : h).$$

Thus the sum of the probabilities of propositions (p and q) and of propositions (p or q) can be derived from the probabilities of the propositions p and q treated separately. Relations between the probabilities of other propositions which can be built up from propositions p, q, \dots can be deduced. This combination law, which may be expressed in the form

- 5 The sum of the probabilities of p on h and of q on h is equal to the sum of the probabilities of (p and q) on h and of (p or q) on h ,

calls attention to the important fact that in general the probability of the composite proposition (p or q) or of the composite proposition (p and q) cannot be expressed in terms of the separate probabilities of p and of q . An analogous situation arises with the definition of the square of $(x + y)$ in algebra in the form

$$(x + y)^2 = x^2 + y^2 + 2xy.$$

The square of $(x + y)$ cannot be expressed in terms of the square of x and the square of y alone. Thus we remark that in setting up laws of combination we have to consider not only the form in which the terms occur, which may or may not be additive, but also the terms necessarily involved, whatever form the law of combination may turn out to possess.

A fourth example may be taken from a very different field. In any attempt to develop a logically coherent account of notions

such as pleasure or pain, we need laws of combination equally as much as when we develop a theory of surface tensions.* The laws of combination have been recognized to be an important part of any system of ethics. Thus G. E. Moore asserts† that "in some kinds of wholes the value of the whole bears no regular proportion to the sum of values of its parts," and that "it is certain that a whole formed out of a good thing and an indifferent thing may have immensely more value than that good thing itself possesses." Again, Hastings Rashdall asserts‡ that "it is of course true that the hedonistic value of a pleasure in combination with another may be something quite different from its value when taken by itself" and discusses how far this fact "may be treated as fatal to the whole idea of a sum of pleasures." In the theory of probability it is found that the probability of some proposition in relation to data q and h is different from its probability when taken in relation to h alone. This fact, far from leading us to conclude that the whole idea of a Calculus of Probabilities must be abandoned, provides a basis for investigation into possible forms for the law of combination of probabilities.

These examples of laws of combination have been taken from very different fields of scientific thought in order to emphasize the fact that such laws form an essential part of the orderly development of any idea whatsoever, whether it forms part of the subject matter of physics or of probability theory or of the theory of value.

It is often possible to modify the concept which is to be taken as the fundamental concept in such a way that the postulates which give the laws of composition may be changed. In such

* The question of laws of combination in the problem of pleasure was formulated by the present writer in a short paper in *Proceedings of the Aristotelian Society*, 1917-1918.

† *Principia Ethica*, p. 27, *et seq.*

‡ *The Theory of Good and Evil*, vol. 11, p. 21, *et seq.*

cases, the forms of the laws of composition which result are frequently an important and relevant consideration in making a decision between several different notions each of which, in other respects, may suitably be adopted as the fundamental idea.

The form of the laws of combination is well known to be important in the theory of relativity. The law of combination of velocities in classical dynamics which took the simple additive form has been modified in an important respect. A particle is moving relative to a system of rectangular axes K with velocity u in a certain direction. the axes K being themselves in motion relative to rectangular axes K' with a velocity v in the same direction.

What, then, is the velocity of the particle relative to the axes K' ? The answer given by classical dynamics was, of course, that the velocity relative to the axes K' is $u + v$. The answer of the theory of relativity is, however, different. On this theory, the velocity of the point is

$$\frac{u + v}{1 + \frac{uv}{c^2}}$$

where c is the velocity of light.

In this case, the velocity is a function of the two original velocities u and v but it is not the arithmetic sum, but a certain other function of a very simple algebraic nature. The particular form adopted for the function has the property that when u is c , the velocity of light, the relative velocity is also c , for

$$\frac{c + v}{1 + cv/c^2} = c.$$

It is interesting to remark the way in which c plays the part of an infinity in the sense that it represents a velocity which is such that if a particle has this velocity relative to axes K which them-

selves have the velocity v relative to axes K' , the velocity of the particle relative to the axes K is also c . This property has been made the basis of one type of infinite number in *Principia Mathematica*.*

The form of this law of combination may easily be modified by a slight modification of the concept in terms of which it is stated.† For suppose we take the rapidity of motion with a velocity v to be defined as—

$$\tanh^{-1} (v/c)$$

where as before c is the velocity of light. Then motion with the velocity of light will be said to have an infinite rapidity, and corresponding to motions with two velocities v_1 and v_2 such that v_1 is less than v_2 , we have motions with rapidities r_1 and r_2 where r_1 is less than r_2 . Motion with no velocity will be said to be motion with no rapidity. Thus the serial order of motions will be unchanged and we have essentially only a new convention for the measurement of motion. With this new conception the law of combination appears in the form “the rapidity of motion relative to the axes K' of a particle moving with rapidity r relative to axes K which are themselves moving with the rapidity r' relative to the axes K is $r + r'$.” The use of this concept then restores the law of combination in the form in which it was given in classical mechanics for velocities.

True Analogy.

The examples already discussed provide a variety of illustrations of the scientific procedure which focusses attention on the form of the combination postulates. The fundamental idea contained in all these particular applications only shows itself

* Vol. 3.

† Cp. A. P. Robb, *A Theory of Time and Space*.

in its full generality, however, when we come to a procedure to which we have already directed attention on a previous occasion.* On that occasion, the process of True Analogy was described in detail and with special reference to typical problems occurring in electricity and the conduction of heat. True Analogy is the extremely important process by which we obtain information about one set of phenomena by means of information about another set of phenomena, through an identity of formal characters. At present the subjects of hydrodynamics, electrostatics, current electricity, attractions and elasticity form a group which have become mathematically cognate by a careful choice of the fundamental concepts.

The subjects are "mathematically cognate" in the sense that the general concepts of these various branches of mathematical physics have been chosen so that they share, to a large extent, the same formal properties. The introduction of the idea of a potential function has, in fact, made it possible to select in each of these subjects concepts which are formally similar. Thus in a large class of problems of hydrodynamics we discuss the properties of a function ϕ called the "velocity potential," which is of the dimensions of a length multiplied by a velocity. The electrical potential V at a point due to a distribution of electricity over any region of space is defined as the amount of work done in bringing a unit charge of electricity from a great distance to that point and is a single valued function of the position of the point. Yet these two functions occurring in branches of physics, whose subject-matter is entirely distinct, satisfy equations and conditions which are similar. As a consequence of this similarity, large bodies of mathematical doctrine elaborated for the solution of problems in one subject can be used for the solution of problems in the other subject. The

* *Proceedings*, 1920-1921.

interpretations of the formulæ are widely different : the form of the analytical results practically the same.

On the previous occasion we described the principle of True Analogy as it occurs in the theory of potential, in all its generality. It has, however, been used with great profit in another much simpler form.

Thus in the mechanics of a particle, the fundamental problem to be solved is the motion of a particle in a field of force of potential V . Under general assumptions, this problem has been discussed in a variety of cases. After the mechanics of a single particle, we are concerned with the mechanics of a system of several particles, and the corresponding fundamental problem arises. Next we have to discuss the problem in the case of a rigid body. Now, if we can deal with the motion of a set of particles and the motion of a rigid body, in turn, in such a way that abstract assumptions are introduced in a similar way in each case, the results of the treatment of the problem in the mechanics of a single particle can be interpreted so as to give results in the two more general cases of a set of particles and a rigid body. We should in this way obtain a number of propositions which might be subjected to experimental test. In these circumstances, an increasing number of consequences of the laws assumed to hold would become available, and they would yield estimates of the probabilities of these laws to which an increasing amount of weight would have to be given in view of the growing amount of data on which they are based.

The process by which the results of the mechanics of one particle can be applied to other branches of mechanics may be described as follows.

We consider the motion of particles m_1 , m_2 and m_3 whose positions in space at any time are given by—

$$(x_1 \ y_1 \ z_1) \quad (x_2 \ y_2 \ z_2) \quad (x_3 \ y_3 \ z_3)$$

referred to a certain set of axes. We introduce the point $\bar{x} \bar{y} \bar{z}$ given by—

$$\bar{x} = \frac{1}{3} (x_1 + x_2 + x_3), \bar{y} = \frac{1}{3} (y_1 + y_2 + y_3), \bar{z} = \frac{1}{3} (z_1 + z_2 + z_3),$$

and call it the centre of inertia of the particles. Then we find that the centre of inertia of the system moves as if the mass of all the particles were collected at it and as if all the external forces were acting at it in directions parallel to those in which they act. This result is true also for any finite number of particles. Thus by the introduction of the centre of inertia, certain results in the mechanics of a single particle become available in the mechanics of systems of particles. By the further extension of the idea of a centre of inertia for a finite number of particles, so that it is applicable to the case of a rigid body, we arrive at the result that the centre of inertia of a rigid body in a field of force moves as if the whole mass of the body were collected at it and as if the forces were acting at it in directions parallel to the directions in which they are acting. This method of interpreting the results in the mechanics of a particle so as to apply to problems in other branches of mechanics has led to the introduction of many concepts. Thus, for example, the motion of a rigid body about its centre of inertia can be obtained from the mechanics of a particle by the introduction of the radius of gyration of a rigid body, together with suitable general postulates.

Another variant on the general procedure which we have described occurs in the Method of Images which is a valuable weapon in problems of electricity and hydrodynamics.

Suppose that we are concerned to find the effect of a tap T, which is supplying water at a certain rate to a swimming bath, when the tap is at a point a near one side, the other sides of the bath being remote enough from the tap to be left out of account. For the sake of simplicity, we assume that the bath is so shallow that we may treat the problem as a two-dimensional one. If a tap

supplies water to a swimming bath at a point which is sufficiently far removed from all the sides for their effect to be disregarded, the water will flow equally in all directions. In our problem this is not the case ; we have, in fact, to find the effect of the one neighbouring boundary of the bath, in changing the rate of flow in the various directions from the uniform rate of flow in all directions which would characterize the problem if the boundary were far enough away to be of no importance. Now it is found that the problem is the same problem in essentials as the problem when there is a second source T' of exactly the same strength placed at a distance from the boundary equal to the distance of the original source but on the other side of it. The problem is, in fact, reduced to the problem of two equal sources in the presence of each other. Indeed, the way in which the presence of the boundary interferes with the symmetrical flow of water from a tap in all directions is identical with the way in which this symmetrical flow from the tap at a is disturbed when there is a second tap supplying water at the same rate at the point a' , which is at an equal distance from the boundary present in the first problem but on the other side of it. By analogy with the usage in optics the point a' is called the image of a in the boundary. Thus the boundary in the presence of the tap has been replaced for the purposes of this problem by a second tap of the same strength at a' , the image of a in the boundary. Thus, in an obvious sense, we may talk of T' the image of the source T in the boundary and indeed, solve the problem by suitably interpreting the solution of the problem of two equal sources, T and T' , in the presence of each other ; this is a simple problem. Other problems of sources and sinks in the presence of boundaries are soluble by this Method of Images. Corresponding problems in electrostatics may also be treated on the same lines.

In the variety of examples which we have given, the technique involved ranges from the simple process of giving a name to

a point geometrically defined, so as to direct attention to it as a preliminary to working out its properties (as in the case of the centre of inertia) to the highly complicated processes involved in potential theory. The guiding idea is, however, the same in all the different cases. We are concerned to build up frameworks of analysis which yield the consequences of adopting a set of postulates with respect to a concept. When various frameworks have been constructed, we bear in mind in investigating the behaviour of new concepts the possibility that their laws of behaviour may be structurally similar to laws, whose consequences have already been worked out. If this is the case, great progress can at once be made. But, even in other cases, it may prove possible to modify the concept in such a way that the body of analysis can be made to yield further propositions. Mathematical Physics is in its present highly developed state partly because it was found possible to introduce concepts in its various branches which satisfy laws structurally similar.

*Meeting of the Aristotelian Society at 21, Gower Street,
London, W.C. 1, on December 17th, 1923, at 8 P.M.*

IV.—SENSATION AND THOUGHT.

By R. G. COLLINGWOOD.

THE old debate between sensationalism and intellectualism has long since worn thin, and it is generally recognized that the question whether knowledge is at bottom sensation or thought is *une question mal posée*. Every modern theory of knowledge tries to find a place both for sensation and for thought, and the rival theories current among ourselves differ, for the most part, only in assigning them places which differ very slightly from theory to theory. There is a widespread agreement nowadays that something takes place in us called sensation, in which we become immediately aware of things called sense-data, or *sensa*, or what not ; and that in addition to this, simultaneously or afterwards, something else takes place, called thought, which takes us behind the sense-datum to the object, or else synthesizes these data into an object, or else infers the object from the datum, or in some other way leads us from the immediate world of sense-data into a world whose primary characteristic is mediation.

The object of this paper, on its negative side, is to contend that this theory is false. I am not aiming at personal criticism, and therefore I name no names ; and if it could be proved to me that no one holds the theory I have just stated, I should be delighted. But the doctrine now accepted by most of us, that " pure sensation is a psychological myth," does not go far enough. It implies, as usually maintained, that the purely sensuous phase of knowledge never takes place altogether by itself, as the cruder associationists believed, and that the activities of sensation and thought always

go hand in hand. I am very far from dissenting from this doctrine ; all I want to do is to take it more seriously than it is usually taken. For its supporters still talk about sense-data or *sensa* in a way which implies that they think these can be treated as independent self-contained entities by analytic thought, even if they are not found in this state by experience. But this is simply allowing oneself to be dominated by the mythology of pure sensation.

The current theories of knowledge which I am venturing to criticize represent a series of attempts at patching up, in the most literal sense, the quarrel between sensationalism and intellectualism by first allowing sensationalism an innings and then granting the same to intellectualism, thus superimposing one philosophy on its opposite in the pious hope that the holes in the one will come opposite a watertight place in the other. The resulting compromise must always be a thing of shreds and patches in which two dominant motives—sensationalism and intellectualism—play sec-saw without getting any nearer a solution of their problems. These philosophies are in fact the direct descendants of nineteenth-century empiricism, from which they differ only in degree of subtlety. Their caste-mark as empiricisms is the splitting-up of knowledge into two parts, a sensuous and an intellectual, and the consequent distinction of the sense-datum from the ultimate object of knowledge. To make this distinction is empiricism ; to deny it in the sense of asserting that the sense-datum is the object, the only object, is sensationalism. I do not think that sensationalism is a serious danger to philosophy at present, but empiricism, I am convinced, is ; and I should like to see some œcumenical council of philosophers adopt the resolution : “If anybody speaks of sense-data, or *sensa*, or apparitions, or appearances, or anything synonymous with any of these, let him be anathema.”

The correlative error to that of asserting the existence of “sense-data” is that of asserting the existence of “universals.”

These are supposed to be the objects of thought, as sense-data are the objects of sense; and just as a pure sensationalism says that objective reality consists of sense-data, so a pure intellectualism says that it consists of universals. Hence the patched-up compromise between the two appears in its crudest and most glaring form when the objective world is regarded as a kind of compound of sense-data and universals. It makes little difference whether the resulting compromise leans to sensationalism, as in the doctrine that the universal is only found in the form of a relation between sense-data, or to intellectualism, as in the doctrine that the universal exists (so to speak) in the free state and is apprehended by sciences which deal solely with the possible.

As against all such doctrines, I propose to maintain that nothing can be an object except to knowledge as a whole, and that sensation and thought are not two distinct cognitive activities each with a specific object of its own—whether separable or inseparable activities—but correlative aspects of a single activity with a single object: and that this object cannot either really or ideally be divided into a *sensum* and (if I may use the word) an *intellectum*. The doctrines from which I dissent, and which I describe as empiricist, agree in making some such division even when they call it a merely ideal distinction. I do not think that such a division, in whatever form, is based on an actual examination of facts. It is based rather on an attempt to maintain simultaneously two complete and incompatible theories of knowledge. First, knowledge as a whole is identified with sensation, and thus the object of knowledge is falsely explained as being the "object of sensation," and so we get the idea of a sense-datum. Secondly, knowledge as a whole is identified with thought, and thus, the object of knowledge being identified with an alleged "object of thought," we get the idea of a universal. Thirdly, an attempt is made to combine sensationalism with intellectua-

lism and so overcome the recognized one-sidedness of each. But this is done by assuming that the theories of the sense-datum and of the universal are true descriptions of distinct parts or phases of the object of knowledge, instead of what they really are, false descriptions of the whole. The empiricists who abound among us to-day take over the sense-datum from sensationalism and the universal from intellectualism, not realizing that in so doing they are embracing the very essence of both the errors which they are concerned to criticize. The sense-datum is not anything real; it is a philosophical error; it is in fact the Humian theory of knowledge, a theory never maintained by the real David Hume—for it is not capable of being maintained—but aimed at by him and therefore not altogether unjustly ascribed to him by text-books. Similarly, the universal is not anything real; it is the *reductio ad absurdum* of the Spinozistic theory as the sense-datum is of the Humian. And the activities of sensating, or “sense-perception,” and thinking, regarded as two modes of cognition by which respectively we apprehend these two objects, are as non-existent as the objects themselves.

I.

To show that there is no such thing as a sense-datum, or pure object of sensation, it is necessary to consider what such a thing would be, if it existed. The characteristic mark of sensation is its immediacy, its being self-contained and self-sufficient at any given moment, apart from any reference to anything outside that moment. In an act of pure sensation we should not be remembering, imagining or thinking: we should be aware of nothing but that which was directly before us, as immediate object, at this precise moment. The sense-datum would be the momentary object as apprehended in this act of pure sensation.

Suppose, then, that we had a pure sensation of (say) the blueness of the sky, while looking straight up at the zenith on a cloudless day. By the hypothesis, we should not be aware,

through memory or imagination or the like, of anything but the blueness of the momentarily-seen sky. In this case we should not be able to call what we saw *the sky*, for that would mean recognizing it as an object which we had seen before, and this would imply memory. Nor should we be able to call it *blue*, for that would mean distinguishing it from other colours remembered or imagined. Nor could we call it *colour*, for that implies a distinction from smell or taste or sound or something else that is not colour, and by hypothesis we should be aware of nothing of this kind. We could not even call it an *object of sight* or an *object of consciousness in general*, for even these descriptions would imply thinking of it as somehow related to objects not immediately present; and this means breaking through the charmed circle of pure sensation. To say anything at all about the experience would be impossible, for to say anything about it, even to ourselves, means placing it in a context of objects which are not present to pure sensation and are therefore, so far as we are purely sensating, not present to our minds at all.

But, it may be said, though we could not *call* it blue, it would still be blue to us; we should still apprehend it as blue even though we could not give it that name or indeed any other. But even this is not true. It would not really present to our consciousness the peculiar quality of blue; for such a quality only reveals itself to us, only catches our attention, by contrast or comparison with other qualities. A person who had spent his whole life doing nothing but seeing, and seeing nothing but a single shade of blue, would really never have seen that shade at all. Only on returning to it from a different experience, whether of colours seen or of colours imagined, would he say—and people often do say something of the sort—“Now for the first time I *see* the colour for which I never had eyes before.” And even so, we are assuming that by contrast with the real or imaginary exercise of some other sense he has come to know what seeing is.

At the same time we are making other assumptions. A continued stare at an expanse of blue sky is already riddled with the activity of memory and imagination, and is thus a very different thing from the instantaneous glimpse of a *minimum visibile*. We have been assuming that the blue was so far homogeneous in space and constant in time that the observer could let his attention travel over it and remember from moment to moment what the various parts were like. That is, we have allowed memory and imagination, comparison and differentiation, to creep in unobserved. This will perhaps be clearer if we suppose that the object, instead of a constant and homogeneous blue, was a changing kaleidoscope-pattern in which every coloured patch was so small as only just to escape invisibility and so rapidly changing as only just to be visible between one change and the next. In this case it is obvious that pure sensation unsupplemented by memory and imagination* would never enable the observer to see anything definite at all. If he were confined to the immediate consciousness of the momentary object, he would not even know that the colours were changing; for at the instant of change all consciousness of the vanishing colour would leave him, and by the time the new colour had appeared he would not know that anything different had ever existed. Similarly, he could not imprint upon his eye the pattern of colours at any given instant, for a pattern, to be seen, must last long enough to allow the attention to travel over it and take it in as a whole, and a pattern which is changing too rapidly for this cannot be seen. This is illustrated by a well-known experiment of the psychological laboratory, in which a pattern of dots is illuminated

* If I am accused of forgetting the doctrine of the specious present, I reply that on the contrary I am expounding that doctrine, which is not only an important truth but absolutely incompatible, when it is properly understood and no longer regarded as a mere mystery, with the sensationalistic psychology for whose benefit it was invented.

for an instant and the subject is required to describe it. If such patterns, each illuminated for the hundredth part of a second, followed one another at the rate of a hundred to the second, they could not even be seen, let alone described; and to a mind conscious only of the sensation of the moment, all objects would be in a condition of this kind.

Thus we can now lay it down that a purely sensitive being, if he existed, could not distinguish whether the object of his vision was uniform or variegated in colour and whether its colour was permanent or changing. For such a being these distinctions would have no meaning; they would never present themselves to his mind. In the same way, he could never be aware of the distinction between a colour, a sound, a taste and so on; nor of that between a real and an illusory object, a sensation, a memory and an imagination. In fact, he would never be aware of any distinction of any kind whatever. No antithesis of A and not-A would mean anything to him; because, being aware only of the immediate object, and this immediacy excluding all differentiation, differentiation itself would be to him meaningless. For differentiation means something only to the mind which can remember or imagine that which is not immediately present to it in the sensation of the moment.*

What we have said about a purely sensitive being applies equally to a being not purely sensitive in the sense of always purely sensitive, but purely sensitive at a given moment or in reference to a given object: it applies, that is, to any alleged act of pure sensation. The sense-datum which is the alleged object of such an act must be absolutely undifferentiated: innocent of differentiations within itself, innocent of differentiations between

* I hope I shall not be accused of maintaining that 'we can only be aware of one thing at a time.' In fact, this is not the case; my point is that it *would* be the case, were we purely sensitive beings.

itself and other sense-data. But people who talk about sense-data seem to regard them as complex objects having an organized structure of their own and standing in all sorts of relations to others of their kind; and this they can do because they surreptitiously import into the notion of a sense-datum the notion of qualifications and mediations which, as a datum of sense, it could never possess. A real sense-datum would be, if it existed, just nothing at all; it would be unsusceptible of any kind of description, indistinguishable from any other sense-datum or anything not a sense-datum. Can there be a completer description of an absolute nonentity?

II.

We have now to consider the converse case, of a pure intelligence devoid of any sensuous element. From such an intelligence the characteristic immediacy of sense would be absent, and nothing would be present to it except a tissue of implications. In pure thought we should never be aware of any object simply and directly presented to us as an object: we should never be able to say of anything "this is so." We could only say "it would be so if such and such were the case." All our statements would be hypothetical; that is, expressing the implications of certain contingencies as to whose realization nothing is said. The logic of pure thought would not contain the categorical form: all its propositions would be universal, and all its universals would be hypothetical. There would be, for such a mind, no distinction between a *this* and a *that*, a *now* and a *then*, a *here* and a *there*. No time would ever be present to it, and therefore no time would be either past or future; no place would be its own, and therefore no place would be not its own. It would be clean out of space and time; nor would it see all space as an infinite *here* and all time as an eternal *now*, because *here* and *now* would be meaningless to it. It would be simply unaware of space and time and of

all spatio-temporal objects and events. It would live in a world of pure universals, of abstract generalities. But it would not acquire knowledge of this world through a temporal process of learning, for that would subject it once more to time and introduce the distinction, impossible apart from the immediacy of sense, between *now* and *not now*. It must have possessed all knowledge of this world of universals from all eternity; or at any rate, if it has not done so, it cannot know that it has not, and is by the definition of its own nature compelled to believe that it has. But this eternity does not mean permanence, the opposite of change: for change would be meaningless to such a mind, and therefore it could not know either itself or its object as permanent.

The notion of pure thought, as ordinarily entertained, gets all its plausibility from certain inconsistencies. We are told that the activity of a mathematician who reasons from one position to another is an example of pure thought. But it is not; for the mathematician's thought is a process spread out over time, and at each phase of it he can say to himself, "I am now thinking this, and a minute ago I was thinking that." But this distinction between one time and another time is non-existent to pure thought: it only arises through the immediacy of sense: just as in our converse case, the permanence and uniformity of the blue colour would have been non-existent to pure sensation, and only arose through the reflective action of thought. A person looking at a blue sky is not merely sensating, he is also thinking; only by forgetting this do we suppose that the blue is a "sense-datum" offered to pure sensation. So a person doing a mathematical operation is not merely thinking, he is also sensating; and it is only by forgetting this that we imagine him to be concerned with a world of pure thought-objects.

But to return to our analysis of the hypothetical case of a purely thinking mind. Its object would be implications, and not this or that implication—for *this* and *that* are meaningless to

such a mind—but all conceivable implications at once : not only the implications found in the world of fact, but quite equally those not so found. This means that its object would consist of the totality of thinkable hypotheses with all their hypothetical consequences to infinity. A mind promised omniscience and presented with such an object as this in fulfilment of the promise would have good ground for complaint, since its alleged knowledge would include no single fact, and the totality of thinkable hypothesis would be a somewhat dusty answer to a soul “sick for certainty.” But that is only a rhetorical objection. It is more important to ask whether there can be a totality of thinkable hypotheses. It appears that there cannot, for two reasons.

First, we should never reach the sum. However many hypotheses are framed, as many more await our attention. Of the invention of hypotheses there can be no end, and consequently the phrase “all possible implications at once” is a phrase without meaning. The universals which are the object of pure thought do not stop short at hair, mud, and filth : their line stretches out to the crack of doom, until it reveals itself as no system, no rounded and organized world, but an abyss of nonsense.

Secondly, the universal is correlative to the particular, and a hypothesis is always devised to serve as a description of facts. A mind wholly engaged in framing universal propositions is a contradiction in terms, for such propositions are never framed *in vacuo*. We are led to frame hypotheses by studying facts, which means that the categorical proposition is logically prior to the hypothetical. Actual thinking is a process in which hypothesis certainly has a place ; but by its very nature it can never have more than a limited place. Rule out the categorical judgment, and you rule out all judgment. A mind restricted to the framing of hypotheses would be condemned to blank and utter nescience. Even the unreality of the alleged sense-datum is no more complete than this. The two are indeed merely opposite aspects of

the same error. Pure sense, apart from thought, cannot see the very thing it is looking at : pure thought, apart from sense, finds nothing to think about. The blindness of the one is, so to speak, the correlative of the other's emptiness. In logical terms, sensation would mean an empty subject undetermined by any predicate ; thought would mean a chaos of all possible predicates never attached to any subject. Where knowledge says "*this* is red, and *this* is blue, *this* is round and *this* is square," pure sensation says, " This this this this . . ." and pure thought says, " red blue round square. . . " in an infinite series. Empiricism thinks that by sticking these two series together, and either switching alternately from one to the other or else making them run concurrently, it can construct knowledge ; but out of non-existent materials nothing can be constructed.

III.

We thus maintain not only that all knowledge is both sensation and thought at once, but that even ideally these elements can never be distinguished. When we have disentangled something from the concrete body of knowledge and called it a sense-datum, it is in reality riddled through and through with traces of mediation, and is therefore not purely sensuous but irrevocably tainted with intelligibility ; similarly the elements in knowledge which we call purely intelligible are so far sensuous that they rest wholly on an immediacy which we have tried to deny. To ask, therefore, what elements in knowledge are contributed by sense and what by thought is as fruitless as to ask the favourite question of the older empiricism, " how does thought arise out of a background of pure sensation ? " In either case we are trying to define the nature of a relation or transaction between two things which simply do not exist. I confess that this doctrine, if accepted, would throw out of employment a large number of philosophers and psychologists who spend their time in discussing

just such questions as these. Obviously my thesis prevents my attaching any weight to the question whether sense-data have extension and so forth ; but it also has further applications.

For example, certain problems in connexion with perception have been much discussed under the assumption that a distinction could be made between what a thing *looks* and what it *is*. The railway lines look convergent, but they are parallel ; the stick in water looks bent, but it is straight ; the more distant of two oranges looks smaller, but it is the same size. Now it is commonly supposed that sensation has some special connexion with what a thing looks, and thought with what it is. What it "looks" is supposed to be what pure sensation reports it as being : what it "is" we are supposed to discover through the agency of thought as criticizing or interpreting the sense-datum. It is only a further and quite legitimate extension of this language to distinguish between the real stick, which "really is straight," and the sense-datum or appearance, which "really is crooked." What we see is the really crooked sense-datum ; but from this we infer, if we are wise, a really straight stick.

Such is one of many doctrines concerning the famous bent-stick puzzle which have this in common, that they fall victims to the empiricist fallacy. This fallacy is committed the instant we make the apparently innocuous assertion that the stick is straight but looks bent. For this distinction already implies just that divorce of sensuous appearance from objective reality which is the essence of empiricism. In order to criticize it we must begin by looking at the problem from the point of view of ordinary language.

If we show a stick obliquely inserted in water to a person unaccustomed to such puzzles and ask him whether it is bent or straight, he will naturally give one of three answers.

(a) He may say "it is bent."

(b) He may say "it looks bent."

(c) He may say "it is straight."

In the first case he is being "deceived by appearances"; in the second, he is on his guard not to be so deceived—realizing by our manner, perhaps, that there is "a catch somewhere"—and in the third he is giving the correct answer. In no case would he naturally reply "it looks bent but it is straight," unless he were trying to convince himself or to warn somebody else of the danger of making a certain mistake, namely, the mistake of thinking the stick really crooked. The case is precisely parallel to asking a soldier accustomed to the English climate to judge ranges in South Africa. Here again, there are three natural answers: (a) it is two hundred yards; (b) it looks like two hundred yards; (c) it is five hundred yards; according as he is (a) merely applying his English standards; (b) on his guard against doing so; (c) applying a South African standard. If he said "it is five hundred yards but it only looks two," this would mean that he was warning himself or someone else not to judge the distance by English standards: that is, he was allowing for the possibility of two standards, a South African standard and an English standard. Now the empiricists whom I am venturing to criticize would say, if they admitted the parallelism of the case, that the two hundred yards was to the soldier a pure sense-datum, but that he interpreted this sense-datum either wrongly, as indicating that the distance was what it appeared to be, or rightly, as indicating a South African five hundred.

That would be parallel to saying, as they actually do say, that the bent stick is a pure sense-datum which may be interpreted by thought as meaning straight-stick-in-water. In point of fact I dare say the empiricist would distinguish, and assert that the "outward distance" of two hundred yards was not a sense-datum at all but an interpretation of sense-data; for once the soldier got well used to the South African atmosphere he would quite give up "seeing" the distance as two hundred yards, which would never happen if two hundred yards had been a sense-datum.

This analysis would be correct, and it yields a most important fact, namely, that when we say "it looks like A but it is B," neither A nor B (200 yards, 500 yards) is a sense-datum, but A is the rejected interpretation and B the accepted interpretation of sense-data by thought. Any distance outward from the eye is admittedly reached by interpretation and is never an immediate sense-datum. But the same analysis must in point of fact be applied to the case of the bent stick. The bentness of the stick is not a sense-datum but an interpretation,* and an erroneous interpretation, while its straightness is equally an interpretation but a true one. This may be shown by observing that people accustomed to such phenomena would never dream of saying that they see the stick as bent, the rails as convergent and so forth: and this is a totally different thing from seeing the stick as bent but interpreting it correctly and as it were automatically.

On the theory we are criticizing, our sense-data come to us in the form of pictures correctly drawn in perspective: we actually see the rails as convergent, the house as diminishing at its farther end, and so forth. It is only (on that theory) by interpreting these pure sense-data that we arrive at the judgment that the rails are parallel and the house cubical. Now if this were so, correct drawing in perspective would be as simple and natural as the correct singing of a note heard. All children would draw in perspective as naturally as all children mimic notes. But drawing in perspective is notoriously a very difficult accomplishment, and one which no child achieves naturally. It took the European mind many centuries of hard work to invent it, and no non-European race has ever seriously tried to solve the problems of perspective. But this is an inconceivable state of things if perspective is simply the way in which our sense-data reach us. And it cannot be explained by adopting the literally preposterous

* In spite of this, it may be described as immediate; but for the sense in which I understand this term see below, IV.

view that when we learn perspective we de-intellectualize our sense of vision and bring it back to a *naïveté*, an immediacy, which the child and the savage have lost. No one who has learnt perspective could possibly confuse that process with one of de-intellectualization, unless he believes that Beelzebub is the right person to cast out devils.

What we learn to do, in learning perspective, is to project the objects we see upon an imaginary sheet of glass held in front of us, the so-called plane of the picture. All perspective is conventional in the sense that it is based on a conventional starting-point, namely, the problem of projecting objects upon this plane. Those who think that objects immediately "appear" to us so projected, are deceived, by the ease with which they have learnt to do a thing, into supposing that they are not doing it at all; or else they are falling, in a more confused way, into the same fallacy which has led some people to wonder why we do not see things upside down.

The smallness of distant objects, the convergence of the railway lines, and so forth, are thus not immediate data of sense but part and parcel of the convention of perspective. When we say that the rails look convergent, our real meaning is that if they were projected on a plane at right angles to the line of vision, the projected lines would be convergent. If one forgets perspective, one no longer says or thinks that the lines look convergent or that the distant objects look small. This is the way in which everyone who has not learnt perspective looks at things, as is proved by the fact of perspectiveless drawing; and it can easily be recaptured by anyone who is willing to try. Put two oranges on the table, one two feet away and the other four: look at them without any thought of reducing them to the same picture-plane but simply as a three-dimensional group of objects*

* Need I repeat that to think of them, while looking at them, as three-dimensional is no more an interpretation than to think of them as projected two-dimensionally?

and ask yourself "does one *look* larger than the other?" If you have really got rid of the imaginary picture-plane you will at once reply "No, they *look* the same size."

An ingenious objector might reply "I should never say they *looked* the same size, but only that they *looked as if they were* the same size." This would amount to a plea that he could not think away the imaginary picture-plane, and that it was therefore an immediate datum of sense. I must insist that this is simply an error. If everyone cannot think away the picture-plane, I cannot help him; I can only tell him that I find no difficulty in doing so, and that I actually find it very much easier to judge "real" sizes, shapes, angles and so forth than to judge the "apparent" sizes, etc., which would be correct in a perspective drawing of the things I see. Nor am I singular in this: everybody in point of fact is more liable to errors of perspective than to errors in estimating real shapes, and those who think they are not have either not tested themselves or are not capable of checking their own errors.

To say that we are immediately presented with a sense-datum of convergent lines which we interpret into parallel rails is thus so far from the truth that its opposite is at least more like the facts. It is equally false to say that we have an immediately-presented crooked sense-datum which represents a straight stick in water. What we really see is not a crooked appearance (as if that could mean anything) but a straight-stick-in-water. If we understand the refraction of the water, we perceive the stick as straight, just as we perceive the more distant orange as no smaller than the nearer one: if we assume the water to refract just as if it were air, we wrongly perceive the stick as crooked. The true perception and the erroneous are the results of two implicit principles of interpretation which are respectively true and false. Seeing the stick as crooked is not a pure act of sensation but a false perception, a perception biassed by a false principle which is none the less present for not being explicitly formu-

lated, and is parallel to the soldier's assumption that the air of South Africa resembles that of England. The straight stick seen through air and the straight stick seen partially through water are related as the landscape 500 yards away in English air to the landscape at the same distance through South African air. In each case there is a principle of interpretation at work, and the empiricists' error is to mistake the presence of a familiar and accustomed and therefore unformulated principle for the absence of any principle at all, and to call that immediate which is mediated by principles of common every-day employment. When we see a straight stick in water and say to ourselves "Here is a straight stick," we are admittedly thinking as well as seeing; but when we see a straight stick in air and say "Here is a straight stick," the empiricist imagines that we are not thinking at all, and that the straight stick is a pure sense-datum; and this leads him to the further error of supposing that when we see a straight stick in water and say "Here is a crooked stick" or "Here is something which looks like a crooked stick" we are not thinking, and that the *crooked* stick is a pure sense-datum. But we are thinking in all these cases; and the crooked stick is not a sense-datum but an error—an error made or an error avoided—an error due not to any omission of thinking but to thinking amiss, interpreting by the wrong principle.

It is often argued that the bentness of the stick cannot be an interpretation and must be a pure sense-datum because it is an appearance which persists after our mistake, if we ever made it, is removed. But this is simply careless analysis. The psychologist asks his subject "Now that you *know* it is straight, can you still *see* it as crooked?" and the subject of course replies "yes." But the psychologist has begged the question by distinguishing knowing from seeing, and is in fact committing the fallacy of many questions—a fallacy in which this type of psychological investigation is very rich. What the subject means by his reply

is that he can still without any effort enter imaginatively into the frame of mind which interprets the facts on the false assumption that water refracts in the same way as air.

IV.

The so-called sense-datum, whenever we analyse it, thus proves to contain exactly what by calling it a sense-datum we deny that it contains: namely "interpretation," or in other words, thought. But to interpret means to interpret *something*, and thus we seem tacitly to have admitted that somewhere there is a crude uninterpreted datum of sense which thought interprets. But we have already seen that there cannot be such a thing; and this implies that what thought begins to interpret is already the product of previous interpretation. It is called a datum or starting-point of thought only relatively, meaning that to a given phase of thought it is a starting-point; but when we come to analyse it we always find that it is the product of an earlier phase of thought itself. There is no such thing as a starting-point of thought in an absolute sense, a point behind which thought cannot be traced, though sensation can.

This does not mean that all thought goes on from all eternity to all eternity. It merely means that at whatever moment of time thinking begins, it does not supervene upon a previous activity of sensating; that not only are sensation and thought invariable concomitants, but that one cannot even get the blade of a knife between them, so that to speak of anything as given by sense to thought means that the datum so described is in reality given by thought to itself: is, so to speak, a legacy bequeathed by a complete unitary act of cognition (neither merely sensuous nor merely intellectual) to successive acts of the same kind.

This leads to a final question. Hitherto we have not proposed any improvement on the formula that defines knowledge as both sensation and thought at once. But we have criticized it by pointing out that the two alleged parts, elements or aspects of knowledge cannot even be conceived as distinct, and that to define knowledge as the union of two such elements is meaningless. This is a point on which the modern theories I am criticizing seem to hedge. They try to maintain that sensation and thought are *λόγῳ χωριστά* though not actually separate; but to divide in theory that which is indivisible in fact is (*pace* Aristotle) to falsify it, to represent it as in itself it is not and cannot be. This is not to be got over by appeal to any doctrine of external relations, for the theories I am criticizing insist that it is an inner necessity, no mere accidental juxtaposition, that unites sensation to thought.

Can we then so reinterpret the doctrine as to save for it some degree of significance and truth? I think we can, if we resolutely purge it of the remains of that faculty-psychology which all of us denounce in public and most of us secretly indulge. For sensation and thought, which carry with them an ineradicable implication of faculty-psychology, we must substitute terms which really do signify aspects and not separate activities.

Now of all knowledge we can say two things: that it is immediate and that it is mediate. Of everything we know we can say that it simply is so, that we "see" it to be so, that we have towards it the unique and immediate feeling of conviction or certitude. In this sense all knowledge is immediate, and in this sense those are perfectly right who maintain that all knowledge is just a subject's immediate and intuitive apprehension of an object. On the other hand, to say that knowledge is only this, is a mistake of the first magnitude. It is never only this; it is always also mediated by reflexion and reasoning and all that goes by the name of thought. Immediate certainty does not exclude mediation; it contains its own grounds telescoped within itself. These

grounds are discoverable on analysis ; and to deny their existence because they are not present to *immediate* consciousness is (talking of telescopes) only putting the telescope to one's blind eye. Of anything we know, we are entitled to say "I simply know it intuitively, instinctively," or whatever word we like to use to indicate immediacy ; but we are always liable to be asked "How do you know it ?" and there is no case in which we are logically justified in refusing an answer. We can *see* the most complicated truths, as Archbishop Temple "saw," without counting them, the forty-two boys in his confirmation class : but just as he might have explained his intuition by showing how forty-two units grouped themselves into a characteristic pattern, so even the simplest truth, "Here is blue," "I feel pain," is capable of being explained or mediated in the same sense, and in fact rests on this mediation itself. The same experience which seen end-on is immediate, seen sideways is mediate. Thus, starting from mediacy or interpretation as fundamental, we can see the necessity of immediacy defined as the presence to the mind of a process of mediation regarded as a whole ; whereas if, with the atomistic logicians, we start from a pure immediacy and try by the accumulation of immediacies to build up mediation, we only get "this this this this . . .," or datum - datum + datum . . . and every datum remains uninterpreted, unmediated. Atomistic logic is the corollary of the belief in the existence of sense-data ; nor is any other logic possible to one who holds this belief, except by an inconsistency.

The nature of all knowledge is fundamentally mediation or interpretation. If we could find any absolute datum which did not already contain mediation in itself, it would not be knowledge. But in point of fact we cannot. Every starting-point of thought is a product of thought. But this seems to destroy all immediacy and reduce knowledge to an endless web of *raisonnements*. How is this to be avoided ?

By seeing that immediacy is present all the time as the immediate presence of thought to itself, its immediate knowledge that it is doing whatever it is doing. This immediacy rests on mediation, for every certainty is the fruit of a process and sums up that process ; but the process itself rests on a perpetual act of summing it so far as it has gone, and without this momentary act, this perpetually renewed immediacy and certainty, the proceeds of mediation would have neither rudder nor compass. Philosophies of abstract change omit the immediacy ; philosophies of static contemplation omit the mediation. Empiricism tries to begin by omitting the latter and to go on by omitting the former : in its anxiety to commit neither mistake it commits both.

The rhythm of all knowledge through mediation to immediacy and back again seems to be what is genuinely expressed, but disguised in a cloud of faculty-psychology, when a distinction is made between thought and sensation. To call these correlative moments of the process by the name of distinct activities or functions of the mind is as if the systole and diastole of the heart were accounted for by saying that there were two kinds of heart at work ; to call them distinct faculties or structures or organizations would be like accounting for the swing of a pendulum by saying that two disembodied spirits pushed it alternately. Mediation and immediacy, the *what* and the *that* of knowledge, are both in reality and in thought inseparable but distinct : opposites, like the convex and the concave of the curve, of which each determines the other and is determined by it.

The current confusions about sense-data and all the rest of them seem to me confusedly to express two quite valid notions. First, the notion that in all cognition two opposite and correlative elements, which I have called immediacy and mediation, can be distinguished. Secondly, the notion that cognition is of various kinds, the act of discovering that a lemon is yellow being some-

how generically different from the act of discovering that twice two is four. Now the theory of knowledge ought to expound the necessary structure of all cognition and also determine its various kinds and their inter-relations. Nor would I deny that these two tasks may at bottom turn out to involve one another. But the faculty-psychology whose *dammosa haereditas* I find in the views I have criticized simply jumbles the two questions together, and trying to bring down two birds with one stone misses them both.



*Meeting of the Aristotelian Society at 21, Gower Street,
London, W.C. 1, on January 21st, 1924, at 8 P.M.*

V.—HUMAN INTERCOURSE BY MEANS OF SPEECH.

By H. WILDON CARR.

1.—LIFE EXPERIENCED AND LIFE OBSERVED.

THE dramatist and the novelist when they wish to give us privileged insight into the inner character of the personalities they create, adopt an artistic convention. The convention of the play is different from the convention of the novel, but in each case it is a pure convention. When the artist is a man of genius—a Shakespeare, a Molière, a Goethe or a Manzoni—we lose sight of the convention and feel ourselves transported into the actual life of the artist's creation, that is, it becomes as real to us as history. The dramatist's convention is to show us an action developing within the enclosure of four walls by removing one of the walls. The novelist's convention is to inform us of the thoughts which his personæ are thinking and dispense with the need of making them express them in their speech. Of course in neither case are we deceived by the convention. We are well aware that constituted as we are it is impossible to see through a wall, or to know the real thoughts which are inspiring the uttered words, but yet we think in each case that the convention is a natural one, supposing only the raising of our ordinary powers in degree. Like Sam Weller under cross-examination by Sergeant Buzfuz we suppose that were our pair of eyes raised to the power of "double million magnifying microscopes" we might see through a flight of stairs and a deal door. Even more ready are we to believe that with heightened spiritual powers we could directly perceive unuttered thoughts. If like Siegfried we could gain

possession of the Nibelung's magic ring, we should be able to discern the treacherous thoughts behind Mime's spoken words and understand the language of birds. Indeed most of us have grown up in the imagery of a world peopled with spiritual beings—guardian angels and mischievous fiends—against whom stone walls and iron doors are no protection, and our first idea of God is of one to whom the secrets of all hearts are revealed. To many of us "Thou God seest me" was our first definite teaching about the unseen world. We are more puzzled at the impediments which seem to interpose between minds and limit their intercourse, than at the fact that there is such a thing as intercourse, and we are unconscious of any mystery surrounding its nature.

One of the first results of philosophical reflection when we direct it to the nature of our own life and personality is the discovery that not only in fact do we never pass out of ourselves, break through as it were into the outer world, but that every attempt to imagine such a break through involves us in self-contradiction and absurdity. "If I were you" is always found to refer to the conditioning environment and never, as in its first intention it appears to do, to the actual lived experience. It is always found to mean "if I were circumstanced as you appear to me to be." There is no escape from the fact that the thinker is the centre of his universe of thought however much that thought may seem to set him free and enable him to roam in the vast universe. It is disconcerting. The illusion amazes us when we appreciate its extent. It also offends the dramatic instinct in us. We like to think of ourselves as capable of playing many parts—and how easy this would be were we, instead of being self-centred subjects of experience, carved out of some homogeneous indifferent stuff. So far indeed as ordinary knowing is concerned there appears no reason at all why the stuff of which our bodies are constituted should not be transitive, why it should not serve now one mind now another. If only our mind were also a stuff there

would then be no absurdity in conceiving one mind as becoming another. The identical atoms of carbon may be a diamond, the hardest known matter which nothing else can scratch, or a piece of graphite which will lubricate steel surfaces or mark paper, or a piece of gritty charcoal, which will crumble to dust in the fingers, so in like manner if there were a mind-stuff we could conceive a complete change of personality, without any difference of substance. Our character would then depend entirely on circumstances, and all apparent initiative in activity would be simple reaction to environment dependent on accidental form and external stimulus.

It is otherwise. However attractive in theory mind-stuff may be, we cannot escape the conclusion that the very term carries with it its refutation. To try to conceive mind-stuff is like trying to imagine a round square. The fundamental notion of stuff is inertia and the fundamental meaning of mind is activity. Each of us lives in his own private world which no other can penetrate, feels his own feelings which no other can feel, thinks his own thoughts which no other can think. Our activity may expand, and with it may extend the range of our effective action, but we never break through, never pass out of our own world into another's world, never cease to be self to become other. The very idea of an interchange of personal experience, if the mind itself is in question, is self-contradictory.

Yet though every mind is individual, self-enclosed in its universe, self-centred in its activity, self-referring in its experience, co-ordinating external phenomena from its own standpoint, there is intercourse between individuals. We are able and we do communicate with one another. We take counsel together. We express our experience discursively. We interchange ideas and we progress by mutual understanding and active co-operation. We recognize a common universe as the reality of our different perspectives. There is a problem, therefore, in the fact of inter-

course. What is the nature of intercourse between individuals whose essential nature is that their experience is personal and uninterchangeable ? What is language ?

2. LANGUAGE IN ITS SCIENTIFIC ASPECT.

The old bible legend tells us that God when he had created Adam and placed him in the Garden of Eden brought to his notice the various creatures he had formed and made subject to him, and that Adam gave them names. This was the origin of language. The names, like the names which he afterwards gave to his children indicated something definite and characteristic in the nature of the thing named. In other words, names were expressive and definitive and to a certain extent arbitrary, for whatsoever Adam called the creature that was its name.

Another legend tells us that the different languages which men speak arose out of a confusion of tongues and was devised by God as a defence against the presumption and power of his creature man. It was designed as a means of dispersing the human race and preventing its concentration. It brought about a conflict of interests to counteract a co-operative effort.

The underlying motive of these legends is the need of explaining the diversity of language in view of the fact that the naming of things is a simple straightforward human act which, however arbitrary in the first instance, has a clear utility value.

A parallel to these simple-minded legends which satisfied mankind during long unscientific ages is often met with in our own scientific age, and many modern scientific theories of the nature and origin of language show little advance on the idea which underlies these primitive legends. That there are different languages and not one accepted universal language is often regarded as a nuisance which could be easily removed and which is only retained through irrational prejudice. And nothing is

more common than to hear philosophers and men of science complain of the ambiguity of terms with the evidently sincere conviction that it would be a quite simple thing for men to agree on a set of pure signs to which absolute meanings could be attached. The belief of most people is that language is both artificial and adventitious, a human invention, and like all mechanical inventions, indefinitely perfectible. We suppose that reason has led us to devise and adopt a means of discourse and not that discourse is part of human nature and a condition of its rationality.

A very different kind of fact in regard to human language is revealed to us, however, in modern physiological science, and a very different concept of the relation of human language to the form of human activity and to the development of human knowledge is necessitated by modern philosophical theory. Language depends on the possession by the individual of a power of intimately co-ordinating an active articulation of sounds with a passive receptivity in the sense of hearing. The integrative function of this complex physiological structure can now be localized in the brain. A human child speaks as soon as its organism reaches the stage of development at which the co-ordination of its speech mechanisms comes into play. If a child does not speak or shows inability to speak, we no longer set it down to want of intelligence, we know there is a physiological defect or a structural abnormality and we know where to localize it. An ape or a dog brought up in human surroundings under the most favourable conceivable conditions of appeal to its reasoning powers does not speak, does not use the human method of discourse, not because it lacks intelligence but because it is not provided in its organism with the physiological disposition which alone would enable it to exhibit that mode of activity. We have then clear scientific evidence that we speak or discourse because we are organized to produce and respond to articulated sounds. Language is not an inven-

tion due to our reasoning powers but a product of evolution. Life has provided the necessary accompanying structure for the active function which discourse implies.

From the standpoint of psychology it is equally clear that language is wholly dependent on an internal psychical disposition, on what in psychological science we may be allowed to call a modification of the mind structure, and in no sense whatever on the mind's attitude to the environment. We have only to consider the case of the human infant to be convinced of the absurdity of all theories which make language depend on a reasoning process, however simple the reasoning and however direct the perception. It is quite inconceivable that the infant previously to the period at which it begins to speak can have been preparing the conditions of intercourse by its perceptual observations, its exercise of memory, and its logical inferences. The infant speaks before it reasons and reasons because it speaks. Speech is a condition of reasoning and not vice versa. Mechanical articulation to produce the imitation of a sound heard is not speech and does not give rise to speech. It is sometimes thought to do so because the names which a child gives to many common objects are imitations of the sounds which proceed from or are associated with those objects, as when ox is "moo," sheep "baa," horse "gee-gee," but the child gives these names when and because it speaks, and the imitation is not mechanical repetition but active responsive articulation. When as often happens a child surprises us by the use of a grown-up phrase which is clearly beyond its understanding and therefore apparently a mechanical repetition, our amusement is not caused by the child's imitation (if we thought it was imitation we should resent it as rudeness), what amuses us is the child's precocity in adopting an expression beyond its understanding. The impulse to talk which we all experience is never a stimulus of external observation but always an inner need of giving expression to our inward intuition. Were the

infant's power of speech simply an ability to imitate natural sounds such as some birds possess, speech might come early but intercourse would tarry long. There is true discernment of the nature of language in the old Greek story told by Herodotus of the king who, wishing to discover the original language of mankind, had two human infants isolated and watched, in order that their earliest babbling might be recorded.

On the other hand it is not difficult to see why it is so commonly held that language is an artificial convention, in its origin a useful device, finally and generally adopted by mankind and handed on from generation to generation by the established habit of bringing up the child in the ways of its parents. Language is not only spoken words, it takes also the form of written signs, and in this form it has become a means of intercourse between individuals separated from one another in space and in time. Writing and reading are clearly artificial, and with difficulty acquired. They demand application and effort and are attained by the individual only after long disciplinary education and they come late in the development of the race. Reading and writing are not intuitive or instinctive but intellectual and logical. In view of this artificial and conventional development of language it seems a natural deduction to suppose that language itself in its origin is artificial and conventional. It is a false deduction. It would be much truer to say of language that it arises out of a purely irrational instinct. The only difficulty in so conceiving it is that language and reason are so inextricably related to one another that it would be equivalent to saying that reasoning itself is an irrational instinct. This is why the theory that language is natural not artificial sounds a paradox.

We may conclude then that language in the form of speech is a psychological function for which we possess in our organism the appropriate specific physiological structure. It is a mode of

activity as natural to the human creature as any psychical characteristic such as herding, or hunting, or packing, or lying in wait, may be specific to any particular race of animals.

3. LANGUAGE IN ITS METAPHYSICAL ASPECT.

When we consider an individual living organism, it presents to us, whatever be the stage of its temporo-spatial development, two aspects : it is a passive material object of our contemplation, and as such it reveals nothing whatever of its own reality ; it is also an active developing object, interesting us not in what it is but in what it is doing, and as such its reality is not contemplated as an object but conceived as a subject with a self-directed activity revealing itself in purposed actions. It used to be thought that so far as science is concerned, whatever may be the case in speculative philosophy, the aspect of the individual as in itself an active subject of experience could be ignored, or at least that for all scientific purposes it is possible to make complete abstraction from it. The scientific ideal is often represented as being a rejection of everything which cannot be externally observed. The modern theory of Behaviourism, for example, is apparently inspired by the conviction that such an ideal of pure objective externality is attainable and workable even in the science of psychology. The principle of relativity has come to teach us that it is an impossible ideal even in the most abstract of the sciences, mathematics. When we measure physical phenomena a condition of the measuring is that we have taken a frame of reference. To us as observers and for the purpose of our co-ordination that frame of reference is a system at rest, and from this standpoint of ourselves attached to a system at rest relatively to moving systems, we measure the celestial movements. But we now know that this system which is our frame of reference is not at rest, even when considered by itself and apart from its relations

to relatively moving systems. We are attached to a system which is accelerating. For the observer attached to an accelerating system to be always attached to a system at rest, it is necessary that the dimensions of the system shall vary in order to maintain the ratios constant. That this is so in fact, that our three spatial axes and our time axis vary continuously in dimension to maintain a constant ratio, is the fundamental concept of the principle of relativity, in so far as it claims to be true of the physical universe. I want to point out what it implies in the nature of the signs which serve us as language.

Suppose an observer attached to a frame of reference, which for him is at rest relatively to other systems, to be able to communicate his measurements of some phenomenon to an observer of the same phenomenon attached to a frame of reference, which though at rest for him is moving relatively to the system of the first observer. If we raise the question in what sense can any phenomenon be the same phenomenon for each the answer with which we must be satisfied is that there may be sufficient correspondence for each to regard the phenomenon he observes as identical with that which the other observes and that he does so regard it. Our present inquiry concerns not the identity of the phenomenon but the means of intercourse. How are we to conceive the nature of the signals which will be for the communicating observers their language? According to our principle, for each observer the frame to which he is attached is at rest. (It is not necessary that the two observers should be different individuals, the same individual making observations at different periods in the progression of an accelerating system will be in a similar case—for example, an earth-dweller reading in June the measurements he had himself recorded in the previous December.) It is clear that whatever material objects are used for the signals which convey the information, they must undergo a transformation when they pass from one system to the other, for the meaning

they serve to convey is necessarily different to each observer. They must, to serve the purpose of intercourse, be adaptable by each observer to the conditions of his observation. Let us take the simplest illustration—the simplest because it supposes the communicability of only the most abstract information. Let us imagine, as many writers of scientific romances have amused themselves by fancying, that there are in the planet Mars observers of nature like-minded to ourselves, and that we have mutually discovered a means of interpreting our communications. We know only one kind of physical phenomenon which we can imagine to serve as the means of communication, light flashes—these then will be our language. But the Martians who observe our signals, observe them conforming to their standpoint, viz., to the standpoint of their system at rest. We observe their signals and dispatch ours from our own standpoint of our frame of reference as a system at rest. The two frames of reference are different and the signals dispatched to convey meaning must be transformed when received. The question is not whether under these circumstances intercourse is possible, we are supposing that it is, but the nature of the language. The material means of communication, in this case light flashes, is different and not identical for the two observers. If it is identical the meaning is different, and if the information received is identical with the information dispatched the material sign has been transformed in passing from one system to the other. In the restricted form of the principle of relativity this fact was expressed by saying that for every system of reference moving with uniform acceleration relatively to another the velocity of light was constant.

The monadic principle in philosophy is simply the generalization of this abstract fact and its application to the concept of scientific knowledge. The principle is that just as within the human world there are individual standpoints so there is for the human world itself a standpoint of human observation. As

human beings we cannot free ourselves from the need of an active co-ordination of the universe, it is a condition of our agency in it, and it is in that need that experience arises. To co-ordinate the universe means that we shall be able to present it to our mind as independent of us and as external to us. Yet though the universe presents itself to us in this objective form we are unable by any means whatever to discover in it an absolute criterion to which we can appeal and so free ourselves from the subjectivity attaching to our co-ordination of it by reason of the standpoint from which we observe. How then on the monadic principle, which declares that all co-ordination of physical phenomena is from within outwards, can there be science in the accepted meaning, namely, knowledge of a physical reality common to all observers? The reply is that science, to adopt a modern expressive term, is an extrapolation. We do not, as we have hitherto supposed, interpolate our science into a reality revealed to us in perception, on the contrary it is science which extrapolates reality conceptually, and intercourse is the means of this extrapolation. Formerly we regarded the physical universe as the condition of intercourse between monads, now we are able to see that it is the inter-monadic intercourse which generates in us the concept of a common universe. It is because we can use variant signs to express invariant relations when transferred from one system of reference to another that we can give objective meaning to truth.

4. THE SOLIDARITY OF MIND AND BODY.

I now come to what seems to me is the real hindrance to a consistent theory of the nature of intercourse, namely, the idea that we can conceive mind and body as able to exist apart from one another. It is in my view inconsistent to say that a living organism, a human being for example, is a monad, if we hold that

the two-fold nature of the human being means that a mind, existentially distinct from the body, is united to it externally and perhaps temporarily. In my view the human being in his two-fold nature is the monad. In thinking the existential separateness of mind and body impossible, my concept of the monad differs in an essential point from that of Leibniz. To make my meaning clear I must refer briefly to the historical aspect of the problem of the mind-body relation.

The common sense as well as the philosophical opinion of the relation of mind and body finds expression in the Christian doctrine of the nature of the soul. In the seventeenth century the Christian dogma lost its theological character and became a concept of philosophy. There is perhaps no finer expression of the rational rendering of the Christian belief than that of Malebranche in the Introduction to his *Recherche de la Vérité*. Following St. Augustine and in full accord with St. Thomas Aquinas he expounds the two-fold nature of man as consisting in the union of a rational soul and a sensuous body. Reason unites man with God, and ranks him with other created minds in a spiritual hierarchy. The body unites him with the material world and determines the mode of his activity and limits its range in space and in time. The two natures are represented as a higher and a lower. Malebranche held, in common with all the Cartesians, that mind and body are existentially distinct, that the essential attribute of the one is exclusive of the essential attribute of the other, that the existence of the one in no way depends on the existence of the other. It was this dual existence which made the nature of their relation the main metaphysical problem in the seventeenth century. Descartes tried to prove that the relation was one of direct causal action. The occasionalists held that the relation depended on a continual intervention of God. Leibniz held that there was no interaction of any kind but a pre-established harmony. By means of this idea of pre-established harmony

Leibniz explained not only the relation of mind and body but generally the inter-relatedness of the monads. If the exchange of ideas between monads by means of conventional signs, had presented itself to Leibniz as a special difficulty there can be little doubt he would have taken language to be a case in point of the parallelism which for him was a universal principle. He was able to conceive this because in his view the skill of the divine artificer had no limit. In creation God had simply given existence to the scheme which omniscience had presented to the divine mind in idea. No such easy and first hand solution is available to us of the modern scientific era, and if we re-affirm the monadic principle we must show it to be self-consistent, we cannot appeal to a transcendent cause. Even in Leibniz we meet with two quite different and mutually inconsistent conceptions of God. God is the creator of the monads, and also he is the supreme monad, the ruler of the commonwealth of spirits. There is also in Leibniz an inconsistency in the concept of the monad itself. The monad cannot be reconciled with a theory of dual existence. A human being in his unity and universality can be conceived as a monad, a constituent cell of his body may equally well be so conceived, but his mind or his body can no more be conceived each as a monad than his hand or his foot or one of his bones. The distinction is very important and the ground of it is perfectly obvious. A cell of my body may be conceived from its own standpoint as living its individual life. in that case I conceive it as in itself a monad, but I do not conceive it as a monad in so far as it enters as a constituent into my organism. I cannot conceive my hand or my foot as monads because there is no standpoint from which they can be conceived as individuals living their individual life. Apart from their function as part of my organism they are not hand and foot. This is the case, too, of mind and body, it is not indeed impossible to conceive them as monads but if we do it seems to me to make

it impossible to form any scheme of their relation. On the other hand if it is the living organism, mind-body, which we conceive as the monad, it can enter naturally into the monadic hierarchy.

The difficulty of understanding the nature and mode of inter-subjective intercourse does not however appertain simply to the metaphysical concept of the monads and their inter-relatedness. There is a difficulty in understanding how minds communicate, whatever be our theory of the nature of mind. The concept of the monad helps us only if it enables us to form the idea of the solidarity of mind and body. Intercourse is sometimes described as "the contact of minds." It is almost universally supposed that in rational intercourse or the exchange of ideas, it is mind which communicates with mind, the two bodies being no more than the intervening means of the communication. The idea that mind and body are a conjunction enters deeply into ordinary thought and finds expression in ordinary language. We say of someone that he speaks without thinking, of another that he thinks and keeps silent, and the idea clearly is that the mind thinks, the body speaks, and in speaking is simply the mind's instrument. Yet physiological research uniformly negatives the possibility of the existential separation of the mind from the body. At least it seems to me that all the crucial work, such as the investigations and experiments of those who like Dr. Head have studied the disturbance of intellectual functions consequent on structural injury, and of those who like Sir Charles Sherrington have experimented on the decerebrate animal, confirms the view that wide as is the essential difference between mental and material phenomena, and difficult as is the problem of how they are to be correlated, not only are mind and body existentially one, but the essential difference between them depends on an existential identity.

To avoid misunderstanding let me make it quite clear that I do not mean that the relation of mind and body is, like the

relation of the members of the body to one another, a relation of parts to a whole. I mean by solidarity essential difference and existential identity. Mind and body are essentially opposite in whatever mode we characterize their reality, but it is impossible to give meaning to any character of the one in abstraction from the relation in which it stands to the other. The seventeenth century philosophers were right when they affirmed the difference of the essential attributes, wrong when they argued that this implied existential difference or as they expressed it dual substances, even when, like Leibniz, they conceived substance dynamically.

Also, in regard to the concept of the soul as immortal, the theory of the solidarity of mind and body is not inconsistent with the Pauline "faith and hope" that man's earthly existence is only a kind of chrysalis stage in a larger life.

There is, however, one objection of a philosophical kind which might be raised to this concept of the solidarity of mind and body. It is that there is an aspect of the relation which makes it very difficult to conceive the difference between mind and body as other than existential. The body is just as much external to the mind as is any object whatever in the physical universe. There is no part of the body, neither the brain nor a cell of the brain, and no aspect of the body, which is privileged to share the subjectivity which characterizes mind. The answer is that the mind also, when we speak of it in relation to the body, is not subject but object of knowledge, it is an object for a subject in precisely the same meaning in which the body is. The subject-object relation is wider and more fundamental and different in its whole bearing to the mind-body relation. No object of knowledge, mind or body, mental or material exists in itself as object, it is always object for a subject, and no subject exists in itself as subject it is always subject in relation to an object.

5. THE SCHEME OF INTERMONADIC INTERCOURSE.

When in place of the metaphysical abstractions mind and body, thought and extension, we conceive the individual living organism, the concrete fact, as a monad, we have then a concept which so far from pointing a direction opposed to that of positive science, interprets science and reflects it. The problem of intercourse is transformed. Instead of devising a scheme by which men's minds communicate, though imprisoned within impenetrable bodies, we have now to understand how men, organized living beings, know and co-operate with one another.

For the scheme of intermonadic intercourse we can now turn to science and to purely empirical principles and need not appeal to metaphysics at all. Mathematicians have familiarized us with the notion of system. To measure the celestial movements astronomers must first choose their frame of reference. The perception of this condition is a consequence of the Copernican discovery. The earth is itself a celestial body moving relatively to other celestial bodies. If we take the earth as our frame of reference then in our measurements we express all equations from the standpoint that it, whatever its own relative movement, is at rest. Astronomers, however, are not obliged to take the earth for their system, they can choose any other—the sun, one of the planets, a comet, or one of the fixed stars—but whatever frame of reference they choose they take it as a system at rest and measure all movements from that standpoint. And more than this they can transform their equations so that what is true for them as observers attached to one system will also be true for observers attached to other systems. The simple principle on which they proceed being that every observer attached to a frame of reference necessarily measures phenomena from the standpoint of a system at rest. It is easy to see that where, as in the case of our earth, the system is one which has acceleration, it must involve elaborate and complicated

mathematical operations, but the principle is absolutely simple. It is precisely the same principle which the astronomer applies to world-systems that I propose to apply to explain the intermonadic intercourse. Every individual human being co-ordinates the universe for himself from a personal standpoint which is absolute. Each of us takes his own organic sense experience as his standard of dimension, his criterion of reality and truth. The astronomer dealing with worlds is not concerned with individual standpoints within the worlds. For his purpose all who use the same world, all human beings, for example, who are attached to the earth system, are observers in one identical system of reference. But individual experience requires in each individual an absolute inalienable standpoint and puts all individuals in the same relation to one another as that which the world systems have to one another save only that it is infinitely more concrete and less abstract. I, for example, am now writing words which are to express to you my ideas. In order that they shall do so they must be transformed for you who read them from what they are for me who write them, for to be effective they must express to you *my* ideas from *your* individual standpoint, and from that standpoint they are clearly not *my* ideas. Our intellectual nature makes such a transformation possible. You to me are an object in my visual space altering in dimensions, absolutely from my standpoint, as you approach or recede. My reasoning power enables me to think of you as not altering in dimensions in yourself, simply by recognizing that you in yourself have an absolute standpoint such as mine, and that all interchange means the transformation from one standpoint to another, and the two standpoints can never be experienced together by any one observer. The pleasure or the pain I feel, the objects of my sense-perception, the thoughts I think, cannot pass from me to you in the form in which I experience them, but they can pass from me to you if in

passing they can change from the form in which I experience them and assume the form in which you experience them. However difficult it may be to schematize the process of this intercourse, there is no mystery, certainly no inconceivability about it, so long as we are concerned with living organisms and not abstract minds. There is no mystery because the organism is the self-expression of a living active principle. I possess the power of reflective self-consciousness. The nature and origin of this power may be wrapt in an impenetrable mystery, but having the experience, it is a natural corollary to discern its possibility in the objects which come within my perspective. It is no more than the astronomer's recognition that observers in moving systems may experience their systems as at rest.

6. SPEECH AND LINGUISTIC ART.

Language stands to thought in the same existential relation as that in which the body stands to the mind. Words cannot be identified with thoughts, they are different in matter and in form and opposite in the kind of order which they present. Yet words without meanings, that is, words without thoughts, express nothing and therefore are not words, and thoughts without expressions are not thoughts, for thinking implies the seeking and finding of expression.

Human beings communicate by speech and, as we have seen, there are in the human organism the special mechanisms which are designed and contrived to bring about this mode of intercourse. We can dissect out these mechanisms and discover experimentally the means by which sounds are produced and articulated. We can also break up speech into words and analyse continuous discourse into "parts of speech." But we cannot by these means discover how speech has acquired the significance which makes it language.

Speech is the counterpart of human reason, it is the external expression of an inner activity. Speech is human nature's

characteristic mode of behaviour. The human articulation of speech follows the lines of the human articulation of the external world. Bergson in his theory of creative evolution has expressed the view that the human intellect is the special mode of living activity which the life impulse has evolved to serve us in preparing the peculiar form of action which our organism is adapted to actualize. If this theory be true then the division of language into separate words and the combination of these words by us into sentences need be no mystery. The articulation of speech will reflect, as we should then expect, the articulation of the world. If the intellect geometrizes the world, what can be more natural than that it should geometrize speech, that expression of itself which is in organic connexion with it? This articulation of the original unity would then appear as itself original and the unity pose as an after construction. Philosophy offers us the correction by presenting the human being in his full activity as a monad. The parts into which reflection seems to disintegrate experience are not the original constituent elements out of which it is constructed but partial views of it, limitations and contractions and concentrations which have utility value in that they serve to direct and form actions. Thus discrimination of the sense receptivity of the organism gives us the localization of special senses, but philosophical reflection shows us that the "manifold of sense" is not an original multiplicity but a work of active thought. The data of the various senses are not associated by the individual, but dissociated by his intellectual reflection.

According to this view of creative evolution the structures and functions of our organism have been contrived to fulfil the conditions of a certain mode and range of activity. In the case of the human being intercourse will appear as one of the ends which (to speak anthropomorphically) evolution has had in view, and articulate speech the advantage conferred on us by the intellectual mode of our activity. From this standpoint an interesting

problem arises in regard to language. Is language, like tool-fashioning, a human invention? Did some individual man discover, by means of the intellectual powers which had been developed in him, that intercourse with his fellows could be improved by the mutual agreement between them to employ arbitrary signs as symbols of absent things? Is language an invention in the same sense in which, as everyone would agree, the printing-press is? If speech is natural to man, reading and writing are not. Philosophy can help us to give the answer. Bergson holds that the most definite distinguishing outward sign of intellect is the making of tools and the contriving of tools to make tools. If, only in so far as this illustration of tool-making is concerned, we accept his account of the difference between instinct and intelligence, namely, that the instinctive tool is organic and the intellectual tool a detached and artificial manufacture, we shall see that while language is part of human nature, closely and organically bound up with its rational character, the applications of language in developed spoken and written speech are inventions. We shall say then that though man is not the only creature who has need of intercourse with his fellows and possesses means of intercourse, the physiological evidence, so far as we can discover, shows man to be the only creature whose intercourse takes the form of articulate speech. Language is the outward form of reasoning or thinking. Reasoning or thinking manifests its superiority to other modes of activity by inventing, particularly by tool-making. This inventing, applied to discourse, has widened the sphere and opened the range of human activity, and secured and strengthened man's control of nature and supremacy in his world. And thus is harmonized the fact, so disconcerting in its first contradictory appearance, that language is natural to man, the inseparable counterpart of his intellectual mode of activity, while the modes of speech are artificial and their development a consequence of the power of invention with which reason has endowed him.

7. CONCLUSION. FUNCTIONAL EXPRESSION AND RATIONAL INVENTION.

What I have been concerned to maintain in the foregoing considerations is, first, that intercourse between monads cannot be conceived as a form of mechanical interaction, and, second, that the origin of speech cannot be an intellectual invention.

As matter of fact speech is a natural function of the human being, for the performance of which a special disposition of structures exists in his body and a tendency to a special mode of activity in his soul. Speech is the mode in which the human form of intellect and its capacity of reasoning finds expression.

All the biological theories of the evolution of man (I know of no exception) infer that speech must in its origin have been an invention. The usual inference is that a new race of Hominidae, at an early period of its emergence by evolution, discovered that natural cries could be adapted and modified and moulded into an instrument of discourse. In like manner all philosophies of language treat words as the conventional use of a material means of conveying meanings from mind to mind. In support of both these inferences, namely, the inference that language in its origin is an invention and the inference that discourse depends on material means, we are confronted with the fact that human speech has developed like an art and in its higher forms is artificial and manifests an inventive activity of a highly intellectual order. Against these theories the view I have put forward is: that invention is the distinctive mark of intellect and that therefore it characterizes the development of speech, but it does not account for its origin: that further, it is the artificiality of the higher forms of speech which hides from us both the nature of speech itself and its origin. The origin of speech is in the nature of human mentality. Reason in its human form would not and could not

exist without speech. The very concept of reason implies discourse, for reason is an activity directed from within outwards. Speech is expression. Self-expression is already speech though the individual mind have no audience but itself. It is this self-expression which becomes communicable, not on the analogy of physical objects passing from hand to hand, but on the analogy of a sympathetic emotion which, in passing from individual to individual, never ceases to be self-expression in the individuals who experience and communicate it.

The philosophical truth which to me seems to underlie the whole problem is that neither in science nor in philosophy do we ever reach the conception of a reality which is a simple homogeneity quantitatively determined. The ultimate reality, whether it be the electricity of the physicist or the activity of the metaphysicist, can only be conceived as opposition. Heracleitus of Ephesus had the true insight. He said: "Homer was wrong in saying: 'would that strife might perish from among gods and men!' He did not see that he was praying for the destruction of the universe; for if his prayer were heard all things would pass away."



*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C.1, on February 4th, 1924, at 8 p.m.*

VI.—THE PRESUPPOSITIONS OF PHILOSOPHY.

By K. J. SPALDING.

To address this Society for the first time is an honour of which I am very conscious, and I desire to thank the Committee, and in particular our Secretary, for the invitation which they made me to take part in its proceedings. I conceive this Society to be one of the chief—I think I might say with as much truth as inclination the principal—means of maintaining and developing among us at the present time an interest in philosophy and in the problems of philosophy.

When I considered what question I might most suitably bring forward upon first addressing the Society, I thought that I ought to attempt to consider that question which lies, in fact, at the root of all those questions which it is the function of this Society to discuss. The question is this : namely, What are the necessary presuppositions of philosophy ? or, in other words, What are those conditions upon whose fulfilment the possibility of philosophizing at all must be thought to depend ? That is a question which some philosophers will perhaps consider a simple, others a very difficult, question. But that it is at any rate a necessary question will, I think, be admitted by philosophers of every school of thought ; for how, it might be asked, can any philosopher be sure that his results will be in harmony with his presuppositions, if he be ignorant, or at least be imperfectly aware, of what those presuppositions are ?

With a view, therefore, to raising the question, What are the presuppositions of philosophy ? I propose to make some inquiry into the original state or condition of the philosopher's mind when he enters upon his vocation as a philosopher.

The philosopher being in the state of nature—the state of the unreflective man—when he enters upon his vocation as a philosopher, it must, I think, be allowed that he at first shares with his unphilosophical contemporaries that relation to the world which they do ; that is to say, he, in common with other men, sees and perceives and is otherwise sensible of a world of natural or physical objects ; he is conscious, too, as they are, of the existence of human beings like himself ; and he has in all probability some notion besides of a spiritual being or beings of a superior kind to either of these physical and human objects. In a word, the philosopher is at first aware of neither more nor less than other men, and like them he uses the world with which he is acquainted in the interest of practical, rather than of theoretical, ends.

This being so, what then, we may ask, is that character in the philosopher which differentiates him from other men and which makes him a philosopher ? Even philosophers, who are perhaps not the readiest people to assent to anything, may yet perhaps be found to assent to this—that that which differentiates the philosopher from other men is his desire to understand or comprehend what other men are content to take for granted. Now that is of itself a position which seems to imply a good deal. It implies, in fact, two things at least : It implies, first, that the philosopher experiences some feeling of anxiety about that world which he perceives by the light of nature, and it implies, secondly, that he has some hope by thought and reflection of quieting or removing that anxiety. Or, varying the expression and speaking more objectively, we may say that the philosopher is conscious, in the first place, of the presence of some want or defect in that experience which he has been hitherto content to

accept with other men ; and we may say that he is conscious, in the second place, that by some exercise of his own thought he may set that defect in the world right. In short, the philosopher enters upon his vocation with a doubt, a question, an interrogation about the world ; with some idea that the world as it originally confronts him is not in that relation to his thought which it ought to be : and, further, he enters upon his vocation with the faith that that suspicion of the world of which he is conscious may be removed ; with the idea that he may by his own thinking satisfy his thought about it.

Philosophy, accordingly, involves two cognate presuppositions. It involves, *first*, the presupposition that thought is a nature incapable of satisfaction in a world which it does no more than recognize and uncomprehendingly accept—in a world, in other words, which appears independent of, and without any understood affinity for, thought's own nature ; and it involves, in the *second* place, the presupposition that thought is of a constitution which has, or may by its development acquire, the power of satisfying itself in a world adjusted and accommodated to itself ; in a world, then, which is not only recognized by thought, but understood and comprehended by it.

We may, I think, better conceive the significance of these presuppositions if we consider what they must be held in fact to imply. In order, then, that these presuppositions—that thought in its real nature is not unconnected, but is connected, with the world—may themselves be possible conceptions, it is necessary to suppose the existence of some essential relation between thought and being—some congruence between the one and the other which thought, on the one hand, cannot think away, nor being, on the other, be of such a nature as to defy or contradict. This, I think, the philosopher is at the outset compelled to presuppose. For consider what must occur if he fails to suppose it : If, on the one hand, thought could think away the congruence

between itself and the world, if it could suppose a real separation between itself and being, then it is plain that thought could never succeed in satisfying itself in the world—thought would then be a nature indifferent and irrelevant to the nature of the world. And, again, on the other hand, if the objects of the world were of a nature to contradict and defy the congruence of thought with themselves—if they, though they could not be *thought* to be incongruous with thought, could yet themselves *be* incongruous with it, then it is, I think, once more plain that thought could never satisfy itself in the world : in other words, it is plain that by no development of thought, however ingenious, could the philosopher realize his intention of embracing and comprehending the world by thought. There would not then be, nor therefore could there be found, any thought or any system of thought such as would be competent to adjust and accommodate the objects of the world to thought itself.

Accordingly the philosopher who has any hope of philosophy—and how without that could he enter upon his vocation as a philosopher ?—must needs suppose that there exists, or that there may be found, some essential connexion between thought on the one hand and being on the other ; and he must repudiate as a notion proper only to sceptics and deniers of philosophy the idea that thought can elude such a relation to being or that being can elude such a relation to thought.

That thought and being should be natures which implicate one another may, then, be said to be one of those conditions on the fulfilment of which the possibility of philosophizing must be thought to depend. The fulfilment of this condition is, however, not sufficient. Something further is required in order that thought and being may imply one another in a manner satisfactory to the philosopher. The requirement is that thought and being must be conceived of as inevitable or necessary thought and being ; in other words, the thought which implies being must

be a thought which cannot itself be thought away ; and the being which implies thought must be, in the same way, a being which cannot be itself thought not to be. Though this requirement may not perhaps seem altogether apparent at first sight, yet I think that, the consequences of its denial being considered, it does then become evident at once. For what is it which follows from its denial? It is, I think, this:—that the philosopher can arrive, upon this supposition, at no better decision than other men as to the nature of *thought*, and he can at the same time arrive at no better decision than other men as to the nature of *being*. For, suppose, in respect to the first point, that the *thought* of the philosopher is other than a thought which the philosopher is compelled or constrained to think : in that case he would be always at liberty to think something else—he could never be decided upon thinking just that thought, and not another inconsistent with it. Let us, indeed, go so far as to fancy that the *being* involved in that uncertain thought were itself not an uncertain but a necessary being ;—yet even in that case it is evident the change of this thought upon some whim of the philosopher could not be prevented—the philosopher would still, in the absence of any constraining power in the thought itself, feel himself at liberty to think anything else about that being. The consequence of this is evident : it is that the being which this thought implied would share in the fate of this thought and would itself change with it. Take, by way of illustration, the following instance : The properties of a being like a triangle are, for the geometrician, not uncertain, but certain and necessary properties. Suppose, however, the *thought* of the geometrician to be in perfect freedom to think just as it pleased about triangles. In that case the consequence to which I have referred would follow—that is, the thought of the geometrician could not then be constrained by the being of the triangle—by the necessary properties of that figure—to think

this and not that about it ; these properties, rather, would change with the changing thought of the geometrician with respect to them. In consequence the philosopher could not, upon this supposition, decide better than other men about the nature of the world ; his philosophy would be a philosophy of uncomprehended assertions which might change at any time at the whim, or with the changing historical circumstances, of the philosopher. Take, now, the second of these two cases in its turn, and suppose the *being* of the philosopher to be other than a being to which the philosopher is able to attribute a necessary, certain existence. It is evident that he would in this case be no better off than in the other. The philosopher could, on this supposition once more, never arrive at any certain conclusion about the world—he could do no more than assert the existence of this or that thing, which is what all men can do as well as he. Nay, were we even to fancy that his thought about being were a necessary thought, but that that being itself were not a necessary being, it is evident even in that case that the philosopher would still be no nearer to philosophizing. He might think, for example, of the triangle in accordance with necessary geometrical principles ; but any actual triangles including (upon the present supposition) nothing inevitable or necessary in them might just as soon contradict as fulfil the principles of his thought ; the philosopher would still remain, like other men, in the presence of simple uncomprehended facts—he could not, upon this supposition, decide anything more about the world than could be decided by persons who had never thought of philosophy at all.

These considerations do, I think, make it evident that, in order to accomplish the philosopher's original purpose of satisfying his thought in the objects of the world, it is necessary for the philosopher to presume upon the possibility of his recognition or discovery, on the *one* hand of a thought, and on the *other* of a *being*, of which each, in its natural congruence and harmony

with the other, is susceptible, not only of a changeable and accidental, but of an inevitable or necessary adjustment : and this, I think, is the real presupposition of all philosophy which is not sceptical ; the presupposition which differentiates the philosopher from other men ; and the presupposition with which philosophers, whether they are or are not aware of it, enter, in fact, upon their vocation as philosophers.

It is evident, if philosophy is to be possible at all, that that presupposition to which I have just referred must be itself possible ; in other words, there must be ground to think, first, that thought and being are natures essentially connected with or implicated in each other ; and, secondly, there must be ground to think that these natures, of thought and being, are not uncertain but necessary natures. It will, I think, help our general inquiry into the presuppositions of philosophy if we proceed now to ask, to what extent we may consider these two conditions to be fulfilled when the philosopher, with a view to understanding the nature of being, begins that debate with his own thought and with the objects of the world of which philosophy will be the issue. What, I propose to ask, must we consider the real situation of the philosopher to be when, innocent of philosophical theories, he enters, like Thales, upon his philosophical vocation ? The answer to this question is, I think, that the first of the two conditions is fulfilled for the philosopher from the beginning, and that the second is not fulfilled. In the following paragraphs I shall try to make plain the grounds of this answer.

Take, first, the condition that thought and being must be considered, in virtue of their natures, to imply or implicate one another. That condition is, then, I think, fulfilled for the philosopher from the beginning. What this condition amounts to is in reality this : that every thought implies some object—that there is, in other words, no thought divided from and altogether independent of some object ; and, again, it involves,

conversely, that every object implies some thought—that there is, in other words, no object independent of and out of all relation to thought. Take, first of all, the first of these two propositions. What it asserts is, that it is not in the nature of thought to think nothing. That is, I think, a true proposition. It is true, I think, that thought can never think nothing. I can speak indeed of nothing ; but when I try to think of nothing, I think at once of something : I think, it may be, of the absence of some actual—it may be even of some possible—thing, or perhaps of its disappearance or annihilation ; but to think of nothing simply—to think nothing apart from anything whatever—is a thing which it seems impossible for me by thinking to do at all. Plato, accordingly, spoke nothing more than the truth when, considering what that “ faculty ” must be which was related to non-existence or nothing, he named it ignorance (*ἄγνοια*) ; ignorance being, in his view, the absence or negation of thought—that, in other words, which has not the property peculiar to thought of involving some object, or objects, of the world (*vide Republic*, V, p. 478). Take, again, in the second place, the second of these two propositions. What this second proposition asserts is, that it is not in the nature of being to exist independently of thought. This proposition seems at first sight to require a good deal of support. I do not think this is because it is any less certain than the other ; I think the reason is, rather, that it contradicts one of the presuppositions of the unreflective man—of the man who does not share in the presuppositions of the philosopher, and who has, indeed, quite other presuppositions. Thus, in the present instance, what the unreflective man presupposes is that objects, and especially natural objects, exist quite independently of what he himself thinks of them ; his presupposition is that his thought is without effective contact with the world ; his thought, he thinks, is like the eye, which sees, but which, by seeing, does not in any sense affect, and has indeed nothing at all to do with,

the existence of its object. This presupposition of the natural man may, I think, be accounted for : it seems to originate in the circumstance that it is the most advantageous for the life of man's practical activity, it being almost necessary for the ordering of our practical affairs that we should consider things in themselves and not how we know them or what their relation is to us. In much the same way skilful fencers are more conscious of their weapons than of the hands which do in fact wield, and are necessary for wielding, them. But the presupposition of the philosopher, when this is uncovered and brought to light, is (as I have tried to show) just the opposite of the practical man's, and I think this presupposition of the philosopher is, in fact, the correct one. The correct view would seem to me to be that it is not in the nature of being (because it is impossible for us to think it to be the nature of being) to exist in independence of thought ; we must always think thought to be in some necessary connexion with it. The ground on which I think we ought to go is this : When we think of an object independent of thought, what we must, I believe, conclude is that, in the circumstance of its being thus thought of, it continues to be dependent upon thought. Let us take the example of a being which, like that of the physical world, seems to be totally independent of and indifferent to thought. Is, then, such a being in truth independent of thought, or is it still dependent upon it ? I think that in one sense we may say it really is independent of thought, namely, in the sense that thought does not conceive itself to be the *cause* or *original ground* of the existence of that object. In this sense—in the sense that such an object is conceived of as a self-existent object—its existence may be said really to be independent of thought. But there is another sense in which this object is and must, as still conditioned by the nature of thought, remain dependent upon thought. How, then, is it still conditioned by the nature of thought ? I answer, it is still conditioned by that

nature, inasmuch as the object must be at least a *possible* object. Take away that *possibility*, and the self-existence of the object is no longer itself possible at all—the object has in this case been deprived of that condition of its existence which still resides in thought. “But you may take away,” it will perhaps now be urged, “the thought even of the *possibility* of a self-existent object; you may completely remove even this attachment of thought to the object; and the object, as a self-existent object, might even then exist.” To this my answer is, that such an object, as being then without any attachment to thought, will neither be a possible nor yet will it be an impossible object; it will be neither the one nor the other, because thought has nothing at all to do with it. But how can such an object be thought to be a thing at all? And how, then, can it be thought to be a thing which is self-existent? In other words, how can this object, being now totally disconnected from thought, have for thought the nature of *being*? I conclude, upon these grounds, that this supposed object’s independence of thought has in reality perished with the thought of its independence. I conclude that there is no longer any way to conceive its existing at all; and I conclude also that, as it can now no longer be thought of by anyone, so also it can now no longer be so much as accidentally perceived by anyone. Say, then, what we can, it seems that thought never can conceive a being altogether independent of thought. The existence of such a being cannot in this case be entertained by thought at all; and therefore being, though it be not caused by the thought that must conceive it, though it be in this sense independent or self-existent, is yet, in virtue of what thought must think it to be, as little independent of thought as we have found that thought is independent of being. We may consider in this connexion the arguments of Berkeley against the existence of an independent world of nature. These arguments do not, I conceive, prove that there is no existence except

one of which thought is the efficient *cause*, but they do, I believe, conclusively prove that, the thought of a self-existent Being being withdrawn or repudiated by thought, that Being has no longer any standing for thought. Being of such a sort, is something whose existence the philosopher ought not to, and cannot, in fact, really, think at all. That Being is not independent of thought is a thesis which has, as this Society knows, been in recent years expounded by Professor Gentile; and though I cannot follow all the conclusions which this philosopher has drawn from his premise, yet I think he is essentially correct in maintaining what he terms "the concept of the ideality of the real," and in repudiating the opposite concept—the concept, namely, of "a reality effectively independent of mind" (*Theory of Mind as Pure Act*, trans. Professor Wildon Carr, p. 2).

The aim of my last paragraph has been to prove that the philosopher's presupposition, that thought and being must imply each other, is one which is fulfilled for the philosopher. I turn to the next of the philosopher's presuppositions, namely, that that thought and that being must be, not arbitrary and therefore uncertain natures, but natures which are certain and necessary. Is, then, this presupposition of the philosopher fulfilled in its turn? In other words, are the philosopher's thoughts, when he enters upon his vocation as a philosopher, such that neither he nor we can conceive of his changing those thoughts? and are the objects, again, which adhere to his thought such that they, too, cannot be conceived as modifiable by the philosopher? The answer to this question evidently is, that this is not the case with them at all. It is evident that he and we can very easily conceive of his changing his thoughts and the objects of his thoughts. In short, the thoughts with which the philosopher originally approaches his problem of comprehending the world are not at all the thoughts which he presupposes to be necessary for his design as a philosopher: the thoughts with which he, like

other men, originally contemplates the world, are not felt by him to be necessary thoughts ; they do not decide or bind, regulate or control, his intelligence. And the same is true of the objects of the world originally contemplated by him ; they, too, are in a similar situation ; they appear to him to be real, but they do not appear to him to be necessary objects : objects, that is to say, which his mind forces him to maintain, objects which, because he cannot but think them, must also be thought by him to exist necessarily. His position as a philosopher is, rather, at first this : His thought and the objects of that thought *are*, and *are*, as we have seen, indissolubly connected with one another ; but they are not conceived by him, nor can we ourselves conceive them on his behalf to be, in either instance, necessary ; each, both thought and being, is a merely fortuitous, empirical nature ; each equally can be thought away by the philosopher ; each is equally changeable, impermanent and shifting ; each may be set up and destroyed by the caprice or changing circumstance of the philosopher. Take an instance of a thought and of a being which, implying one another as they must necessarily do, are yet arbitrary, empirical natures remote from the thought and being presupposed by the philosopher. Max Müller says that the priests of Pampeluna laid down in the minutes of their Chapter their considered conviction that “ Bask was the only language spoken by Adam and Eve in Paradise.” Now that piece of philosophy is one in which the thought and the being that go with it are, indeed, like all other thoughts and beings, related together—they are strictly dependent upon one another, and they do so far meet the requirements of the philosopher. But they are, too, in this respect wanting—neither has any necessity in it, each is as empirical as the other, as alterable, then, as the other, and each is equally liable to dissolution by the caprice or, it may be, by the reason of mankind. I judge upon these grounds that empirical thought and empirical being,

though indissolubly connected together, are yet, in whatever guise they appear and with whatever degree of familiarity, insufficient for philosophy. Take them to be sufficient, and philosophy will then be no better than the child of man's caprice, or passing historical circumstances. We might in that case say of philosophy what Francis I said with a good deal of audacity about woman—

Souvent femme varie,
Bien fou qui s'y fie.

We may sum up our present conclusions with respect to the original presuppositions of the philosopher, and of their fulfilment when he enters upon his vocation, in these words : We may say, in the first place, that in order that the philosopher may fulfil his task of comprehending the world, it is necessary for him to presuppose an essential relation between thought and being ; and this is a presupposition which we have seen ground to believe is fulfilled : and we may say, in the second place, that it is necessary for him also to presuppose the terms of this relation, of thought and being, to be in each instance necessary for his thought ; and this is a presupposition which we have seen ground to think is not fulfilled : in other words, the thought which the philosopher is originally aware of is not necessary but empirical thought, and the being of which he is originally aware is not necessary but empirical being.

The nature and consequences of some at least of those presuppositions which the profession of philosophy involves in the philosopher have now been mentioned. I come now to what may be regarded as a second stage in our inquiry into these presuppositions. The general ground of the presuppositions characteristic of this stage is, I think, evident. It is this : If the philosopher is to attain his end of comprehending the world, he must presuppose himself capable of passing by reflection, on the *one* hand, from empirical thought or opinion (as it might be

called) to necessary thought or reason, and of passing, on the *other* hand, from empirical being or the world as it is known to opinion, to necessary being or the world as it is known to reason.

We have, then, to inquire: What are the presuppositions implied in this passage from opinion to reason, and from the world as it is known to opinion to the world as it is known to reason? The answer to this question is, I think, the following: First, the philosopher must presuppose that what he at present thinks and what he at present knows are, as being equally empirical natures, both alike imperfect and in need of revision; and, secondly, he must presuppose the discoverability of another mode of thought and of another mode of being than those of which he has hitherto been aware—that is, of a mode of thought and of a mode of being which are not empirical but necessary and certain natures. The philosopher must, in a word, presuppose an ideal both of thought and of being—an ideal, which although still somewhat of a phantom, yet, like the Continent of Columbus's dreams, seems to him a more desirable object, a thing of more moment, than the actual thoughts and beings within and around him. Accordingly, there are two points or termini supposed from the one of which it is the aim of the philosopher to pass to the other. These two presuppositions—of a point of departure and of a point of arrival for his thought—are, however, only preliminary to a third presupposition which follows from them. This is the presupposition, that this passage of his thought from the one to the other of these two points or termini is not impracticable, that there is no gulf fixed between them. The philosopher does not think that he is like the rich man in Hades; what he ventures to presuppose is that he may, through the education and rationalization of his own intelligence, attain his end of passing out of the world of chance and opinion into the world of reason and knowledge. We may then say that to the philosopher who is not a sceptic,

philosophy must appear as a study of this kind :—as one, that is, which requires on his part an effort to develop from his own mind—the place at present of mere opinions—ideas of a necessary kind which imply objects of a necessary kind;—just as his empirical mind implies fortuitous objects, so must this rational mind of which the philosopher is in search imply necessary objects. We might compare the philosopher, at the outset, to a mathematician who is originating the solution of some geometrical problem ; he is like the mathematician in this—that he, likewise, has faith that there lies within him a power of developing from the resources of his own intelligence ideas competent to solve a problem not within the sphere of his present actual knowledge. This process from empirical to necessary thought, which constitutes the act of philosophizing itself, is the medium whereby the philosopher supposes himself competent to attain his end, if it be, indeed, attainable. Plato has aptly illustrated this presupposition of the philosopher when, in the Republic, he is describing the character of the ideal philosopher ; for “the true lover of knowledge,” he says there, “is always striving after being, he will not rest in the multiplicity of individuals which is an appearance only, *but will go on . . .* until he have attained the knowledge of the true nature of every essence by a sympathetic and kindred power in the soul.”—(Republic, VI, p. 490 ; trans. Jowett.)

Such being the presuppositions which set the philosopher going, it might seem that we had now reached the limits of an inquiry whose object was to consider only the conditions, and not the act itself, of philosophizing. But there still remain, I think, two necessary consequences to be drawn from these presuppositions which are not without importance, or which are, rather, I believe, of the highest importance, to the practising philosopher. I will, therefore, conclude this paper with an attempt to draw out what I conceive these consequences to be. The first is

connected with that *suppression of opinion*, the second with that *attainment of truth* in which the process of philosophizing consists. I shall speak of each of these consequences in order.

And first of the consequence which is involved in the philosophical suppression of opinion. We have seen that opinion, and the objects of opinion, though the one as Subject and the other as Object, are indissolubly connected, are yet not of the stuff of which philosophy can itself be made; neither being, for the thought of the philosopher, a necessary nature; in other words, we have seen that an opinion is not understood by the intelligence, which possesses it only accidentally; and we have seen that the object of opinion remains out of touch with the intelligence, which is then simply confronted by that object. In short, the philosopher is debarred by his own presupposition from philosophizing on the basis of mere opinions, and he is debarred equally from philosophizing on the basis of objects of opinion. The philosopher, we must say, cannot begin to philosophize on the basis of ideas which are nothing more than accidents of his mind, and he cannot begin to philosophize on the basis of objects which are only founded upon such accidents. His presupposition as a philosopher is the opposite of this, namely, that he must depend for his philosophizing neither on the one nor on the other.

Now the consequence of this presupposition which I wish to emphasize is this—that the philosopher who intends to be thorough cannot philosophize on the basis of what is commonly termed “experience.” He cannot do it because “experience”—as taken in the common acceptance of that term—is, upon the whole, little more than an assemblage of fortuitous objects, of objects, that is, of opinion. That experience is not an assemblage of objects of which we know the reason is what I think everyone may admit. What it for the most part consists of is this:—of objects with which we are extremely familiar, but which

we do not on that account come any nearer to understanding. Take, for example, our common notion of the world of sense ; our common notion of this has, as Berkeley, I think, demonstrated, no necessity for thought in it. It is, like the notion of God or spirit, a notion at first simply possessed by our minds. Accordingly its objects are in just the same situation, viz., existent for, but still uninterpreted by us—we are aware only of being confronted or encountered by an experience which we can as easily think not to exist as to exist. The case with respect to objects of sense would, it is plain, be very different from what it now is, had the philosopher attained to a philosophy of these objects ; had he, in other words, attained to the point of developing a notion which, being felt to be in itself necessary, was also one which required an object agreeing with the nature of an object of sense ; the philosopher would in this case have raised sensible objects into the sphere of philosophy, and would have been true to his presuppositions as a philosopher. So long, then, as it is through opinion only that the philosopher is in contact with the world, so long he is not moving in the region of philosophy ; he has not suppressed the operation of opinion in him ; he has in that degree fallen short of his real intention and presupposition as a philosopher.

To consider, in the second place, the consequence I have mentioned as involved in the philosophical attainment of truth. We have seen that there exists in the philosopher who is not a sceptic an anticipation of passing, through the medium of his thought, from opinion and the world of opinion to reason and the world of reason. His anticipation is that he may, like a mathematician, by the exercise of thought—by developing in himself some part at least of his own rational nature—thereby become aware of objects which, equally necessary with his reason, will form for him a fragment or some larger part of the world of true or philosophical knowledge. Suppressing and putting an

end in himself to opinion and the world of opinion, with all that is empirical in thought or object, he conceives himself able by thought to become one with that ideal intelligence of which as a philosopher he went in search, and, having thus come in contact, not with objects of opinion, but with those objects whose existence is required by his reason—the objects which are the expression of his reason and apart from which his reason cannot itself exist—he anticipates that he will accomplish that end or some part of that end with which he entered upon his vocation as a philosopher, the end, namely, of understanding and comprehending the world.

Now the consequence of this presupposition of the philosopher which I wish to emphasize in its turn is this --that the philosopher who intends to be thorough can philosophize on no other basis than these necessary ideas and the objects of these necessary ideas. We have seen that the philosopher cannot philosophize on the basis of opinion, on the basis of those thoughts by which he was at first brought in contact with the world, and now we see besides that he has no need to do this—there is (if his presuppositions may be believed) another instrument of knowledge altogether, which it is his business to realize, and, if he can, to bring to life, in himself. That, I think, is the second necessary consequence of the philosopher's presuppositions. That it is a consequence of very great importance will, I think, be allowed by everyone who sees into its real significance. What it evidently involves is this: That the function of the philosopher is to engender his knowledge of objects by begetting within himself notions which, being necessary in themselves, necessitate also the being of the objects of the world; in other words, what his presupposition requires him to attempt is to develop out of the resources of his reason, and by means of its impulse, a knowledge of those beings which he at first uncomprehendingly accepted, with other men; the philosopher, I repeat, must, without

depending upon opinion or the objects of opinion, endeavour to actualize within himself such a Mind as by the right and necessity of its own nature is moved and impelled and drawn on towards the knowledge of every real form of existence. I speak, it will, I trust, be understood of an ideal of philosophy. My object is, rather to show what philosophy, which is not sceptical, presupposes, than what philosophy has actually effected. I wish, in short, to show what I conceive to be the necessary aim of the philosopher, whether or no that aim has been or can be in effect attained by him. I will, then, venture to repeat once more what I conceive this aim to be : I conceive it, then, to be the aim of the philosopher (if he is to fulfil his task of comprehending the world) to engender from himself a Mind which of itself advances from one to another necessary idea : to the end that, without the aid of an empirical assumption or assumed or opined object, he may, in the light of these ideas, perceive objects correspondent to them, and to which these ideas impart that certainty which appertains to themselves. Plato, who was perhaps endowed by nature above other men with true philosophical presuppositions, speaks of such a Mind as one which, moved by its own impulse or desire for being, " does not cease from that desire (*οὐδ' ἀπολήγουσιν τοῦ ἔρωτος*) until it has attained the knowledge of the true nature of every essence " (Republic, VI, 490) ; having arrived at the knowledge of these rational objects without the aid of opinions or empirical assumptions (*ib.* p. 511).

I will briefly summarize these two conclusions by saying, in the first place, that the philosopher who is true to his vocation cannot philosophize while he continues to adhere to opinion and the objects of opinion ; in other words, he cannot philosophize so long as he begins by adopting any object, like a waif, from the world of opinion : his function is to suppress and to get rid of these opinions and of the objects of these opinions. In the second place, the proper function of the philosopher follows from this

conclusion: his function is to exchange his empirical for his rational mind, and objects which are empirical for objects which are rational. He, like other men, is born with a mind whose opinions, some true and some it may be false, attach him to a variety of uninterpreted beings or things; and his object is, leaving these opinions of which he was the instinctive and unenlightened author and begetter, together with the things that belong to these opinions, to become the enlightened begetter of ideas or principles which are superior to opinions and, through them, of a knowledge of objects which are superior to objects that are merely opined.

Perhaps it will be thought by some that if this is the function of the philosopher his is a hard case; if this, it may be said, is the bow which the philosopher must draw, what philosopher will venture to draw it? But I think that philosophers have often got themselves into difficulties because their philosophizing has been imperfectly related to their philosophic end; they have tried to use other instruments than that whereby they ought, as I think, to hit the mark which as philosophers they aim at; hence it has followed, not so much perhaps because they want the strength, but because they have not used the rig't instrument, that their philosophizing, while it has been to some extent inconsistent with what I think we must regard as their real philosophical presuppositions, has also led them into unnatural difficulties. There have been, indeed, not a few philosophers—and they not the least famous—who have made some trial of this “bow of Odysseus,” if I may call it so. Heraclitus, for example, if I rightly judge the meaning of his fragment, ἐδὲ ζῆσά μιν ἐμεωυτόν; Socrates when he promulgated the doctrine of ἑρῶθι σαυρόν; Descartes, Fichte, and Hegel; each of these philosophers tried, I think, this bow in his own fashion; for, turning away from the empirical mind and the empirical objects of that mind, they sought in themselves for a new and a rational Mind, and for

objects known and necessitated by that impulse or *ἔπος* which is natural to it. Their object was by self-examination to "deliver themselves" of a Mind in the light of which all that was uncertain might disappear, and all that was certain, in mind or object, might become manifest.

What form such an ideal Mind would assume were the philosopher actually to discover it ; what sort of universe would in the light of it become manifest ; in short, what shape a philosophy which was true to its presuppositions might probably bear, are inquiries which fall outside the scope of our question : "What are the presuppositions of philosophy ?" I will only venture to say in passing that I have tried to return some answer at least to these questions in a book which, considering that impulse or *ἔπος* out of which philosophical knowledge ought, in my judgment to spring, I named *Desire and Reason*. The questions which are there debated, and which I think are those which we ought as philosophers to debate, are no doubt the most difficult of questions to answer or to understand when answered. We are, though philosophers, still not immune from those instinctive habits of thought with which we enter upon our study of philosophy ; those presuppositions which, like other men, we have inherited, along with our practical natures are not at once or easily to be eradicated : they tend to stay our feet and tempt us to return from the unfamiliar paths of philosophy to the familiar high road of common opinion and common sense. We might, I think, compare the difficulties of the philosopher to those of the perplexed, though persevering, pilgrim of the "Pilgrim's Progress." Philosophers are like the much-enduring Christian in the respect that they, too, have set out, under an impression and conviction of error, from an easy-going and perhaps not very sober city—the city, I mean, of opinion—in which they at first lived along with their contemporaries. And as they go they are again and again tempted by obstructions, and perhaps by the taunts of

men, to return again to the point of their departure— they are like Bunyan's Christian in contending with a host of dangers, and chief of all, I conceive, with the danger of being caught and turned back by the wiles and power of "experience" which I might compare, I hope in safety, to Apollyon. I think there is a further and last respect in which I might venture to compare the philosopher to Bunyan's Pilgrim: He would, like him, be unable to persevere—he would sink under the load of his perplexities, if no ideal were to keep his spirits up; an ideal which is, indeed, not one of virtue only, but of something perhaps more comprehensive still; I mean his ideal of a Mind which, when he has put off that empirical mind with which he is now encumbered, will make him free—he will then be what he wishes to be and will know what he wishes to know, and will reach his end and finish his pilgrimage; for it is the ideal of the philosopher which keeps him marching.

I will just add one remark which follows from these observations. It is that this ideal of the philosopher is not of an impersonal—of a transcendent Mind: it is not, although it be ideal, a Mind which he is himself unable to bring to life in himself; it is, rather, an ideal which is in this also like the ideal of Virtue, that it is actualizable only in that intelligence which conceived and still pursues it in its own interests. To realize or embody this unknown Mind or Ego or Reason in himself this, I think we may say, is as much the aim of the philosopher as to realize an unknown Virtue in himself is the aim of the lover of virtue. The presupposition of the one is that he may by grace identify himself, though he be now full of error, with the fulness of virtue; of the other, that he may, by thought identify himself, false and full of opinions as he at present is, with reason itself.

I will sum up the conclusions which I have ventured to lay down under the following heads:—First, I supposed that the aim of the philosopher was to understand the world. I endeavoured

to show, secondly, that this aim involves in him the presupposition that thought and being are not unrelated but necessarily related together. I showed, thirdly, that this relation does in fact exist ; but, fourthly, that more than this was required by the purpose of the philosopher ; the additional requirement being that thought and being should be necessary thought and being, and, therefore (since the original thought and knowledge of the philosopher do not fulfil this condition), I showed, in the fifth place, that it is for this thought and this being that philosophizing is the search ; the object of the philosopher, in other words, is to pass from opinion and the world of opinion (in which at the outset the philosopher finds himself) into reason and the world of reason. Therefore, sixthly, the philosopher who is true to his aim of understanding the world must not rely on opinion, he must go on until he has got rid of opinion and opining, and of the fortuitous "experiences" which are connected with such an activity ; his reflection must not cease until he has developed within himself a Mind which, being not fortuitous but aware of an inward necessity of its own, by the impulse of its own nature brings such objects of the world as have a genuine existence progressively into the light of knowledge. Lastly, I tried to show though an image in what sense this Mind might be considered a transcendental Mind ; the answer given being that this Mind was not transcendental in the sense that it could not come to life in finite intelligences, but that it was transcendental only in the sense in which the ideal of goodness is transcendental : in the sense, namely, that, being not yet realized, it was yet the incentive to the highest activities of human nature ; and, hence, not unrealizable. I will, in conclusion, add only that I am very conscious of the hastiness and imperfection of this Paper, but that I hope that what I have said may be of use to others in seeing more deeply into the questions I have brought forward in it. Some, indeed, may think there is nothing

in reflections of the present kind to make time spent on them of much use to their own philosophizing. But if, on a first view, these philosophers feel themselves inclined, like Omar, to

Turn down an empty glass --

yet I venture to ask even them to consider whether something may not be derived from these reflections of interest to views which seems perhaps at first sight opposed to them. All philosophers are, as I conceive, in fact engaged in developing--some in one direction and some in another--what, in the language of Socrates, is "the knowledge of themselves"; and, as to do this is the whole end, so I conceive it also to be the whole duty, of philosophers.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C. 1, on February 18th, 1924, at 8 p.m.*

VII.—DISCUSSION ON “THE ACADEMIC MIND” WITH
REFERENCE TO MR. JOAD’S “COMMON-SENSE
THEOLOGY.”

SYNOPSIS OF THE ARGUMENT.

BY C. E. M. JOAD.

THE line of argument which I wish to follow derives such plausibility as it possesses from a certain metaphysical theory with regard to the nature and purpose of the universe and the relationship of human activity to that purpose. Divorced from its metaphysical basis what I have to say about the Academic Mind may, as I have found by experience, strike the reader as merely a piece of impudent and gratuitous iconoclasm.

I make no apology, therefore, for beginning with the metaphysical argument. This is a variant of the theory of Creative Evolution, not after Bergson’s model, but rather on the lines of Schopenhauer, Samuel Butler, and, more recently, of Shaw for the doctrines of whose “*Back to Methuselah*” it seeks to provide a metaphysical foundation. This foundation is laid in my “*Common Sense Theology*,” and the conclusions based upon it are then applied successively in various fields of human activity. The application of these conclusions in the sphere of Education results in the doctrine of the Academic Mind. All that I can hope to do here is to state quite dogmatically first my general view* with regard to the nature of the Universe, and secondly the theory of the Academic Mind in which it finds expression in the sphere of Education, leaving those who are interested to know the reasons for it to refer to *Common Sense Theology* where they are given at quite inordinate length.

* As it was when this book was written.

(1) Stated baldly the theory of evolution is as follows : Dualism is probably fundamental, the movement of evolution representing a conflict between a vital, creative, spiritual force on the one hand, and the inertia of dead matter (matter being defined according to the most fashionable scientific formula at the moment) on the other. In so far as evolution can be said to have an object it is the elimination of dead matter, and the infusion of the whole Universe with life and consciousness. In the meantime what I call the Life Force expresses itself in all the different and temporary organisms which we recognize as having life. These may be regarded in the light of tools or weapons formed for the purpose of overcoming matter, and I think of each such tool as representing a temporarily individualized portion of the Life Force, much as Schopenhauer thought of his Will as objectifying itself in various ways and at different levels in all the phenomena of the world of appearance. As opposed to Schopenhauer, however, I regard the matter of which the Universe is composed not as being in itself an objectification or manifestation of the Life Force, but rather as the embodiment of a hostile and obstructive principle, which is moulded and animated by the Life Force for its own ends.

The Life Force proceeds by the method of trial and error, and man may be regarded as its latest experiment. This experiment is not altogether satisfactory. Man possesses free will in virtue of which he is enabled to pursue his own ends, which are not by any means necessarily identical with the evolutionary purpose for which he was created : he is also in a large measure infected with the inertia which characterizes the matter of which his body and brain are composed. In so far as he is the expression of a dynamic changing principle he changes, but he changes slowly and uncertainly, and he tends continuously to lapse into inertia by sinking into the rut of habit and normal behaviour, out of which the Life Force is as continually under the necessity

of jolting him. The jolting is accomplished by various devices, one of the most important of which is the production of the great man or genius. The genius is sent into the world to give conscious expression to the instinctive purposes of the Life Force. He points the way to a new and incidentally to a higher level of thought, conduct or achievement than that which has hitherto been reached, and, in so doing, indicates the road along which humanity has next to travel. It follows that the genius must from his very nature violently and persistently challenge the accepted categories of thought, canons of art, or rules of conduct current in his age. This challenge is bitterly resented at the time by men's natural disinclination to have their beliefs disturbed and their conduct questioned. Since, however, the message of the genius embodies the next move forward on the part of the Life Force, it is only to be expected that the coming generation will accept and embrace his ideas with as much vigour as its fathers opposed them. That is why the genius who is abused and persecuted during his lifetime is usually posthumously ennobled.

Acceptance by the new generation leads to new habits of thought and conduct, which, in course of time, become as stereotyped as the old. The ideas which were once new and living become in their turn dead and formal, but they continue to be held through force of habit by the vast mass of mankind until a fresh impulse from the Life Force causes them again to be questioned. Thus the living beliefs of yesterday are petrified in the Church Prayer Books of to-day, and the immoralities of to-day are enshrined in the Family Heralds of to-morrow.

The effect of this is that truth in science, orthodoxy in religion, morality in conduct, and greatness in literature are all of them relative. They are relative to an age and they minister to a purpose. It follows that the work of a genius, or the teaching of a reformer or Messiah will lose their value in

course of time, simply because the particular stage of human evolution in thought and conduct whose coming the genius or the prophet is designed to herald is passed and left behind. As a natural corollary we should expect to find the whole course of human evolution strewn with the debris of disused ideas which humanity no longer needs. The products of past genius are like suits of clothes which mankind has discarded because it has outgrown them. Man has learnt, or has refused to learn, what there was to learn in the thought of Plato or the teaching of Christ, which, from the point of view of the Life Force, may be regarded as experiments which have once for all served their purpose or definitely and finally failed to bear fruit. The purpose of evolution will be served, therefore, by forgetting these experiments, and concentrating on the new ones which the Life Force throws up to succeed them.

(2) It is now possible to explain the special significance which I attribute to the "Academic Mind." The Academic Mind takes the achievements of the past at their face value, that is to say it regards their value as permanent and their greatness as absolute, and on the mistaken assumption that it is the business of education to transmit what it calls the inherited knowledge and culture of the race, utilises them as a staple article in the mental dietary of the young.

This attitude could in any event only be justified if there were a definite body of ascertained knowledge or certain fixed canons of taste, which could be passed on as acknowledged truth. No such body of knowledge, no such canons of taste exist. There are brute facts of course, but even educationalists agree that the mere inculcation of brute fact is not education.

For the rest, there are dogmas in religion, hypotheses in science, theories in political economy, rival schools in philosophy, and personal and highly subjective interpretations by historians in history. The culture and knowledge of the past consist, in short,

of facts and ideas. The facts, for example, the fact that the battle of Waterloo was fought in 1815, do not, it is agreed, constitute education, while as regards the ideas, their truth, as I have tried to show, is necessarily relative, and, so far from having value outside the age in which they were born, becomes definitely harmful when used as the staple of education for succeeding ages on the assumption that it is still true.

I have suggested above that the continuous pulsing stream of life and energy that emanates from the Life Force is the source and inspiration of each fresh advance in thought and change in morals. Once, however, the advance has been made and the change effected, the living vital flow which once found expression in the change, loses its movement and solidifies to form a crust. This crust takes the form of dogma in thought and convention in conduct. I call it a crust because the living ideas once enshrined in the dogmas having served their turn have ceased to live; the form of the ideas is the same, but their substance has departed.

The thought of the past then is in a very real sense form without substance, and, as such, it can be made to serve as an effective barrier against the oncoming thought of the present. The beliefs of our fathers are obstructive lumber to those who are striving to bring to birth the beliefs of our children, while the code which once expressed the insight of a past generation forms a barrier of conventional conduct which the efforts of the sage or teacher must break, and has too often sought to break in vain.

The Academic Mind, then, diverts the attention of young and eager minds from the new thought of the present, by exhibiting for their admiration the dogmas of the past. These, as we have seen, have form without substance; they have retained their shape but lost their significance. Hence it is characteristic of the Academic Mind throughout to pay more attention to

form than to substance. The Hegelian notion that man was made for the State and the Puritanical notion that he was made for the Sabbath, are characteristic instances of the subordination of substance to form. Professionalism, *e.g.*, that it is better to kill by authorized methods than to cure by unauthorized ones, represents the same tendency. In the teaching of literature this tendency issues in interminable discussions about questions of sources, origins, debts and influences ; in philosophy it finds expression in the teaching of the history of philosophical thought instead of in a pre-occupation with the problems presented to philosophy by, for example, the development of modern science. It does not inquire whether a theory is true, but it anxiously tabulates the various interpretations which have been placed upon it, and discusses the views of rival commentators who have identified themselves with this interpretation or with that.

Now the only possible interest which any philosophical theory can have for a young and inquisitive mind is the interest that lies in the question, "Is it true?" This is the one question which the Academic Mind never answers. The answer that it does provide is the merely formal one, that Aristotle got the theory from X, and transmitted it to Y ; that Bywater thinks he meant P by it but Butcher inclines to Q.

The Academic Mind, then, in dealing with the thought of the past is concerned with form rather than with substance. If I am right in my metaphysical views, it must necessarily and inevitably be so concerned, since of the thought of the past all that remains is its form. Aristotle is no longer so true, just as Sophocles is no longer so great as he once was, simply because the ends which the truth of Aristotle and the greatness of Sophocles were designed to serve represent no longer the stages immediately ahead of mankind in its evolutionary journey.

The moral is don't teach Aristotle and don't rhapsodize over Sophocles, or, if you must, be careful to explain that their interest

is neither philosophical nor literary but historical merely, and that there is no need for the student to worry himself over the truth of Aristotle's theories or the greatness of Sophocles dramas, since whatever they may have been once they are now so no longer.

The argument may be summarized as follows : The Academic Mind believes that the purpose of education is to transmit the inherited knowledge and culture of the past. This view is wrong and harmful—

(1) Because it assumes that a definite body of agreed knowledge and admitted culture exists, which is not the case.

(2) Because, as a result of this mistake, it is compelled to present hypothesis as fact and subjective interpretation as objective truth.

(3) Because it concentrates upon purely formal questions, and neglects the living spirit which once imbued the form with substance.

(4) Because it is necessarily compelled to do this, since the living spirit has fled and nothing but the form remains.

(5) Because this deliberately cultivated interest in the dead form of the past distracts attention from the new expressions of the Life Force in the experimental thought of the present.

The Academic Mind is, therefore, obstructive to the purpose of the Life Force. It represents the principle of inertia in thought, just as the law represents the principle of inertia in conduct, by seizing and casting into a hard unyielding mould the living thought of the past, just as the law crystallizes and stereotypes the living morals of the past. This mould must be broken by the Life Force before it can make any fresh advance, yet it steadfastly and often successfully resists any attempts to break it. Hence the Academic Mind will be hostile and suspicious of new developments, and to the best of its ability will compass their suppression. When they succeed, the Academic Mind in

its representatives of fifty years later, captures them, stereotypes them, asserts that they possess unchanging and absolute value, and once again uses them as an excuse for creating a fresh crust of thought and morals to obstruct the future.

Hence each fresh advance in human thought and morals is made in the teeth of the vested interests in the thought and morals of the present. The thought and morals of the present are the formalized and crystallized versions of the advances and heterodoxies of the past. And they depend for their authority and their capacity for obstructing what is new upon a glorification of the past, which asserts that its thought is permanently true and its works of art permanently valuable. This glorification is the work, indeed it is the life work, of the Academic Mind.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C. 1, on March 3rd, 1924, at 8 P.M.*

VIII.—CREATIVE MORALITY.

By LOUIS ARNAUD REID.

I FEEL that at the outset of this paper some apology is due on account of its subject-matter. When Dr. Carr kindly suggested that I should contribute to the *Proceedings* of this session, my thoughts at once turned to the subject of a volume on which I have been working, with the same title as this paper, and I decided to try to express that theory in short form, partly for the subjective value of such an exercise, partly out of a hope that others might find the subject worth discussing. I might have done better to have chosen some single aspect of my problem. Précis writing has its dangers. I shall try, however, to be as clear as I can and to avoid at once the extremes of vagueness and of mental indigestibility.

It is usual to begin the construction of a theory by attacking other theories in order to contrast them with one's own. This is in many ways a valuable procedure, but I cannot follow it here. I may say, however, quite dogmatically, that, though there are ethical theories which take some account of the relation of man's conduct to the spiritual cosmos in which he plays a part, there are none, so far as I know, which do so quite sufficiently or quite satisfactorily. I would begin this paper, therefore, by saying that the true definition of the meaning of goodness must imply directly the functional relationship which a man has to the universe. This is not the whole of ethics, but it is its alpha and its omega.

If we believe that goodness can only be discovered by considering man's function in relation to a wider universe, it follows that we must have some kind of theory about that wider universe,

some kind of general philosophy or metaphysics or ontology (which terms I take here to be synonymous). Ethics will be grounded in metaphysics.

In making this supposition it is important to avoid misunderstanding. By saying that ethics is grounded in metaphysics we do not necessarily imply that moral truths are deduced, *a priori*, from abstract metaphysical principles. We may begin with our moral experience itself, and say that the facts of our moral experience form one important item for the consideration of metaphysics. But when we seek to understand the meaning of our moral experiences, it is necessary, I think, to expand our moral theory into a general philosophy of the kind of world in which experience takes place. If we do not, we are left with some form of intuitionism, which is, in the end, dogmatic. A clear example of this is the ethics of Henry Sidgwick. Sidgwick tells us that certain propositions are axiomatic, citing prudence, rational self-love and justice as examples. When we come to examine such so-called axioms, however, we find, as McDougall has so clearly pointed out,* that all possible moral axioms are either tautological or not axiomatic. If indeed you doubted one of the axioms of Sidgwick with a denial born of conviction, Sidgwick confessed that he had no answer to make. This is surely an impossible position. The truth of ethical theory must be tested by consistency or coherence, like any other theory. And the consistency must be cosmic rather than local. It seems to me that even judgments of value must face this test if they are to escape the stigma of subjectivity.

But although this is so, I do not propose here to discuss metaphysics, but instead simply to offer at its face value what is, in fact, a metaphysical proposition which is the outcome not of reasoning, but of an important type of direct human experience. The experience we may call the "experience of

* *Hibbert Journal*, Jan., 1921, "Is Conscience an Emotion?"

Value," of which I shall speak more presently. Here it is sufficient to say that it arises on any occasion when we are impressed, whether through goodness or beauty or truth, with the Worth or Value of life and of our experience of reality. The metaphysical proposition which tends to follow from this experience is "reality reveals Value," or "there is objective Value in the world with which it is good for us to have contact." To establish rationally the truth of these propositions requires metaphysics, and, as I said, we shall not discuss that. The most important objections to it come, on the one hand, from pessimism, and on the other hand from the realistic metaphysics (mistakenly so called, I think) which denies objectivity to Value. But both these objections can, I believe, be met. Here I make it an assumption that reality reveals Value, an assumption which may appear more valid when in a moment we turn to consider the experience on which it is based. But I may remark now that although the particular value-experiences seem to be relational, they also appear to be grounded in an objective source which, for want of a better name, we can only call "Value" (with a capital letter). This, once more, is of course dogmatic metaphysics.

As the whole of the following theory is based upon what we have called "the experience of Value," as the thesis is that it is through contact with and expression of a world revealing Value that a full vital moral life is initiated and inspired, it is important for us to understand a little more as to what this experience may mean.

I have mentioned beauty, goodness and truth; the experience of these are what we may call the chief modes of the value-experience. But this must not be interpreted too abstractly. A value-experience is any experience which leads us to judge objectively of reality and life as worth while. It may come through friendship and love, through the beauty of art and nature, through religious adoration, through the discovery of

truth, through the expression of gentleness, goodness, generosity, noblemindedness, through the serving of mankind, through the life of physical adventure, through all but an infinity of other ways. And although these ways might be classed under the heads of goodness, beauty and truth, yet it is actual concrete experiences which we must bear in mind in thinking of the experience of Value. Nevertheless, it is useful to consider the modes in themselves and their mutual relations. Let me first indicate what I mean by these modes of experience.

The experience of *beauty* arises through the senses, although there are apparent exceptions to this. The beautiful object arouses in the subject a certain unity of psycho-physiological responses which can be described in fairly accurate terms. But although the æsthetic experience is essentially lived in a psycho-physiological functioning, that is not, I believe, the whole matter, and æsthetics goes wrong if it supposes that it is. There is aroused in the marked and intense æsthetic experience, a state of mind which is ineffable, in which the experiencer appears to transcend the limitations of space and time, and to be carried into communion with a larger whole which savours more truly of reality than the experiences of ordinary everyday life. Of the fact of this ineffable feeling there is no doubt, one can call for the testimony of a cloud of witnesses. Anyone who has lived intensely the æsthetic experience will know the kind of thing I mean. Its psychological implications and its validity I do not pause here to discuss, for the question is extremely difficult. I would simply note once more that following naturally upon this experience comes the metaphysical proposition "life is worth while, the world reveals Value."

The experience of the value of *truth* can stimulate in the subject a similarly ineffable (although concretely different) experience of joy in the harmony and order and coherence and unity which the insight of truth reveals at certain moments.

This experience is, I think, much less frequent than that of beauty, but it occurs sometimes, and it is referred to by Plato more than once when he speaks of the dignity of philosophy. And when Bradley to-day says, "some in one way and some in others, we seem to touch and have communion with what is beyond the visible world," and that the intellectual effort of philosophy "is a principal way of thus experiencing the deity," he is referring to the same thing.

Of *goodness* I shall say nothing beyond noting the fact that both in contemplating goodness in others and in achieving goodness ourselves there may arise a conviction of the supreme worth of life, of living, of the purpose in reality which makes life so. Again, no one who has not experienced this will have the least notion of what it means. But if he has not, he should look for some flaw in himself or in his environment.

There are three points which must be noted with regard to the experience of Value : (a) They are distinct from one another ; (b) they interpenetrate ; (c) they mutually supplement one another.

(a) The experiences are distinct. They are ways of approaching reality which at the finite level of ordinary experience are really different, and it is not literally true to say "beauty is truth, truth beauty," though it may seem so to the higher intuition of the poet. The modes of the Value-experience correspond roughly to the modes of experience itself, namely cognition, conation and feeling, and their quality partakes of the particular mode which is uppermost. The experience of the æsthetic object is distinct, and has no direct relationship with goodness ; truth again, strictly speaking, arises through cognition and not otherwise.

Nevertheless, this must not lead us to overlook another fact, (b) that the modes interpenetrate. Objectively, the experiences of the values of beauty, goodness, and truth have

one source, the Universe : subjectively, the intense experience of one involves elements of the others. An example or two may suffice. In one sense goodness is just goodness and nothing more. In another sense goodness reveals truth or insight because (*e.g.*), it is the outcome of some understanding of the agent's place and function. Again, although goodness, abstractly regarded, cannot be said to reveal beauty, yet we all know that the living act of genuine goodness gives to the external action of the agent a grace which is all its own, and which it is impossible to separate from moral quality. It is a commonplace that fine moral character leaves its beauty, with advancing age, upon the physical features and gestures of the man. So once again, although the object of beauty, as in art, be a sensuous one, yet effort and purpose went to its making, effort whose quality may be called moral, purpose which we may think of as having been guided by some desire for truth. In the finished expression these qualities are revealed, though we may not notice them, and they contribute to the whole object of art and to our whole experience of it. This type of argument regarding the interpenetration of Values and of our experiences of Value may be extended to the other cases, and, although not always easy to maintain, is, on the whole, I think, justifiable.

By (*c*), the mutual supplementation of the modes of the Value-experience, I mean that for a full life all modes of approach to reality must to some extent be practised, and that each approach is a supplement to the others. Is the devotee of art inclined to exalt art as the only value ? He is wrong. So with the pure "intellectualist." Neither aestheticism nor intellectualism are by themselves sufficient for the life of man. But although this is generally admitted, another proposition, which is more seldom made, and which is of the greatest importance, is true. It is that morality is just as incompetent to stand completely by itself. Right conduct is certainly the most immediate practical need, and

we must act according to our lights. But much of the narrowness and the stuffiness of moral theory and practice has been due, I believe, to the abortive attempt to define the moral in terms of itself as revealed in custom, and to say that this "moral" is of exclusive importance. Thus we get so called morality combined with every sort of ugliness and intellectual self-deceit. Full vital goodness is, it seems to me, wholly impossible without that sanity of outlook (which, if I may add it, carries with it the divine gift, the sense of humour) which is born of true insight, without the graciousness of mind which arises out of the continual intercourse with beauty. Man's goodness must consist of a well-being and a well-working together of all his parts (although in the nature of things it is the function of one man to employ more especially this faculty, and of another to employ that). This is the truth of the doctrine of *εὐδαιμονία*.

The significance for the moral life of the experience of Value is supreme. I have said that through it all truly vital moral conduct is possible. By "vital conduct" I mean conduct which is the expression of an individual, conduct which is original and personal, which is not mere conformity to a code of moral rules or laws. When we say that goodness is the expression of the Value which has been experienced, two questions arise: (i) how is it that this vital goodness is initiated and energized? And (ii) what is the character of the expression which is goodness?

(i) The most current theory of motives to-day is that of "instinct" psychology, of which McDougall was the first great publicist. In his recent *An Outline of Psychology*, McDougall has in many ways considerably modified his position, but I think he would still hold to the main propositions set forth in *Social Psychology*. "Directly or indirectly," he says there, "the instincts are the prime movers of all human activity: by the conative or impulsive force of some impulse (or of some habit derived from an instinct) every train of thought, however

cold and passionless it may seem, is borne along towards its end . . . All the complex intellectual apparatus of the most highly developed mind is but a means towards these ends." In these impulses "we are confronted with the central mystery of life and will" (p. 44). There is no need for me here to describe how, according to Shand's theory, the instincts are organized into sentiments, and the sentiments in turn into character. Nor is there any call to evaluate the "instinct" theory. It is a protest against the doctrine that reason is a sufficient motive for conduct, a protest made, by the way, by Aristotle more than two thousand years ago. Reason, indeed, has need to be defended to-day; the place of reason is very much more important than some realize. But it seems true that reason, in itself, is incapable of moving us. This is a difficult question, and I must leave it.

My purpose for the moment is to indicate that the "instinctive" theory of motives is really insufficient in itself to account for the essence of the higher life of morality, though it may throw light on a large part of human life. There do appear to be impulses present in moral life which are wholly irreducible to terms of instinct.

It may be possible to employ some such conception as that of "emergence," used by Lloyd Morgan and Alexander. Alexander says, "The emergence of a new quality from any level of existence means that at that level there comes into being a certain constellation or collocation of the motions belonging to that level, and possessing the quality appropriate to it, and this collocation possesses a new quality distinctive of the higher complex. The quality and the constellations to which it belongs are at once new and expressible without residue in terms of the processes proper to the level from which they emerge . . ." (*Space, Time and Deity*, II., pp. 45-46.) Applying this, we might say that the "higher" quality present at the

level of the (*e.g.*) moral life would be an "emergent" from a complex of instinctive and other processes. In this case, although this "higher" quality is concomitant with a certain complex grouping of "lower" factors, it is entirely new and is not reducible in any way to terms of these lower processes. If we accept with "natural piety" (Alexander's phrase) the emergence of "higher" (*e.g.*, moral) quality we must be prepared to admit that the term "instinctive" is, in itself, inadequate to explain the whole of the higher life of man. There is, that is to say, an entirely new quality, unpredictable at the instinctive level.

The too extreme claims of some "instinct" psychologists seem to me to be due to forgetfulness that "instincts" as we know them are mere empirical phenomena and not *a priori* principles. Indeed, as they themselves would admit, we know only the *activities*, the *functionings* which we call "instinctive."

It is curious that many such psychologists, who specialize in the study of animal behaviour in relation to a particular kind of environment, should incline to forget (as is shown by attempts to universalize the principle of "instinctive" explanation) that apart from that particular kind of environment these selfsame innate tendencies would have no meaning. They may be innate in the individual, and present in all members of the same species, but their environmental determination is no less a fact. That they have been *evolved*, by reason of a necessity to survive in relation to a certain definite set of external conditions, we must, I think, admit, at least as a speculative hypothesis. So long as the conditions remain approximately similar, so long do the responses possess meaning and efficiency. At the human level the conditions of life are still similar enough to render explanations of conduct in terms of instinct quite valid up to a certain point. The theory of "stimulation" enables this kind of explanation to be extended still further.

But if we admit, as a speculative hypothesis, that instinctive responses have been evolved in relation to one kind of environment and are now innate, there is no immediate reason, I think, why we should not admit the possibility of development at the human level of new responses in relation to a new kind of environment. The environment I mean is the environment of intrinsic Value, and an example of the kind of response I mean is the creative response of the artist to beauty. The response of the good man I take also to be creative. Intrinsic Value is not, we must presume, cognizable below the human level, and creative responses are neither present in purely animal life, nor are they in the case of human beings reducible to terms of instinct, though no doubt instincts go to the building. "Creative" is a distinguishing term. I believe that at the point at which intrinsic Value can be contemplated and enjoyed there arises the possibility of a new kind of life, a creative life, wholly different in kind from anything below itself, though not "cut off with a hatchet" from previous stages.

The two elements, the environment and the response to the environment, must be clearly distinguished. On the one hand, at the civilized human level where instinctive wants are in some measure satisfied, a more distinterested reasoning, a more objective contemplation, becomes possible, and it is no exaggeration to say that through these very powers a different world arises for us, and "new stars swim into our ken." This revelation is, I think, one of the most important results of the possession of reason. Through its possession arise the possibilities of the ineffable experiences of the Value of reality.

On the other hand, there is the response to this new environment. The experiences of Value are, if at all intense, what I should be inclined to call emotional,* and we may say, using

* See "Instinct, emotion and the higher life," *British Journal of Psychology*, Vol. XIV, Part I.

popular language, that the emotional experiencing of Value through any mode stirs us to new activity ; *e.g.*, experience of beauty may arouse desire to make more beauty, truth to discover more truth. And so on. But it is not strictly true to say that the *emotion* arouses desire. It is rather, I think, that the cognitive awareness of Value brings us to a state of mind where conative tendencies hitherto dormant become roused into activity. Conative energy is not literally manufactured, it is released upon the cognition of Value, just as it is released when the perception of a feared object stimulates us to escape. It may be called "innate" in the sense that it is (I would at least suggest) present in all members of the human species who are sufficiently developed to be able to contemplate objective Value. To sum up, just as instinctive response is evolved in relation to a certain kind of environment through the general necessity for the organism to adapt itself, so are these conative responses to an environment of Value in turn a manifestation of the general necessity for man to adapt himself to a wider universe revealing Value. It is the adaptation, not of the animal because of a need for physical survival, but of man because of his need for spiritual security. I mean that by creative response to Value we master something of both the world and ourselves. Value is a principle both of the wider world and of us, and in expressing it we experience something of the sense of satisfaction, support, security, which is the sign of perfect functioning in an important sphere. All art has its origin in a desire to capture, to master, to make secure and permanent by external concrete expression, not only Value but oneself, and to communicate to others this fleeting glimpse of the infinite. Why it should be so we cannot tell : we only know these things as facts which are filled with significance for the philosophy of man.

(ii) In tracing the origin of the energy which enables man to live his specifically spiritual life to a general necessity for him to

adapt himself to a wider cosmic purpose, we have really answered our second question (p. 137 above). The response is (when natural and complete) an *expression* in some material, a concrete *creation* revealing value, a creation which could not have been but for the individual's experience of a wider Value. It is thus the making of something original and new. This is the marked difference between response to Value and instinctive response to physical environment. What is sometimes called the "reaction pattern" of instinct is innately laid down in the sense that every member of the species behaves in a more or less similar fashion when aroused by the appropriate object. The characteristic of creative response, on the other hand, is that it is unpredictable; it varies *with* the individual, and it varies in its particular form *in* the individual from time to time. In the heaven of beauty you might place the immortals side by side to view the single ineffable Beauty itself. Titian would be the painter still, continually surpassing himself, Beethoven the musician making new harmonies, Phidias the sculptor carving fresh and lovelier Athenas. Again, there is a freedom known in creation which is present at no lower level of life. It is interesting in this connexion to note that McDougall, who was previously a believer in psychological determinism, now believes that the fact of creation is a refutation of the view of absolute determinism.

As to the psychology of creation I can say nothing here, and it is indeed an obscure subject. I shall rather concentrate upon an outline of what I mean by creation in conduct.

In the first place we must distinguish between the responsive conations within the Value-experience itself, and the conations which follow that experience. Croce's view is that contemplation is itself expression. But whilst we must admit that contemplation does involve conations, it seems to me that these are adaptive, and that true creation is the literal expression in

some matter which possesses its own forms and provides its own limitations. I prefer Bosanquet's dictum that the æsthetic problem is "how a feeling can be got into an object"* to Croce's denial of the need of an embodiment. It seems to me that Bosanquet on this point is right and Croce wrong, that in an object of creation there is always the meeting of something spiritual with what (empirically, anyhow) is material.

It follows from this, and it is true independently, that Value-expression alternates with Value-experience. At one time we contemplate and enjoy, at another time we are fired by the necessity to express our spirit within things. Now it is the mountain of transfiguration, and now it is the dusty plains of human action of whatever sort. W. E. Hocking calls this the "law of alternation," and the fact is too familiar to need further explanation. But the point which, although it may theoretically be admitted, is not always realized in practice, is that both these aspects of life must be fulfilled. The merely contemplative life, or the merely practical life, is by itself inadequate, and in the end is, strictly speaking, impossible.

We have seen that each particular mode of Value-experience may condition a particular type of expression. Experience of beauty may condition art, experience of truth, more truth, of goodness, more goodness. What we are particularly concerned with here is the expression in the materials which the social moral life presents to us, of Value as experienced through any of the modes, in any way whatsoever. If the experience were of goodness only, the problem would be simpler because then the transition would be directly from experience of goodness to expression of goodness, by a kind of imitation or emulation or suggestion. As we know, imitation may be important at a certain stage of morality.

* *Three Lectures on Æsthetics*, p. 74.

But true expression is profounder in character than this. The experience of Value through truth or beauty may stimulate us to a finer expression of goodness. I do not think that, if we remember the distinct character of the Value-experiences, we can speak of a literal transference of Values. The effect of experience of beauty, or truth, is not *directly* moral, as some have thought. But although there is no direct transference or transformation of values, there is a connexion, as we saw, between the values, and it is a profound one. The difficulty is resolved if we remember, on the objective side, the meeting of values in Value, and on the subjective side, the interpenetrability of the experiences of Valæ. If on the objective side beauty were the source of mere sensuous pleasure, if the satisfaction of thought were but that of a pleasant game, it would be impossible to show that these had much bearing upon morality. But the true values are otherwise. It is only by considering them as *ways* that their full significance becomes apparent. Beauty leads beyond sense to an experience of ineffable harmony. Intellect gives insight into an objective law and harmony and order the full experience of which intellect cannot find words to express. Both are different revelations of a single Real. On the subjective side, there is the interpenetration of Value-experiences. Experience of beauty is experience of a whole man, and an intense Value-experience of any sort must vibrate throughout the whole being, thinking and moral as well as æsthetic.

So in the end it is from the experience of the Value of a single Reality by a single undivided consciousness, that the inspiration to goodness comes, and it is this which gives to true goodness what we may call its "universality." This "universality" of goodness we do all feel, I believe, when we witness an act of real moral worth. As in hearing the great symphony it seems as though all creation and even eternity had waited to be revealed at this moment, so we may feel that in this living act of

goodness is revealed the Purpose of the world. It is *in ordine ad universum, sub specie æternitatis*. As Plato puts it negatively, in speaking of the morality of the man who imitates true Being :—“ Littleness is the very opposite of a soul which is ever longing after the whole of things both divine and human.”

The answers to several questions regarding this “creative goodness” which reveals universality may be summarized. *Firstly*, examples of creative goodness cannot be given. The only way we can know it is through actually experiencing examples of living expressive creative goodness, goodness of the kind that humbles and chastens us. And the only way in which I could possibly convey that here would be through literary art itself, upon which I am not prepared to embark. The danger of citing historical examples is that these are apt to be regarded as mere types, and so to lose their vital individuality. It may be taken for granted that we have all encountered creative goodness. The term “creative” is not a recipe for something new in the world of morals : it is only an attempt to describe the nature of the actual best which we know. *Secondly*, we said that Value experiences may issue in expression, the expression which interests us here being moral expression. But though a single Value-experience *may* find outlet in moral expression, the moral life must, of course, be stabilized and secured by the formation of habit and of a sentiment both for Value and for the expression of Value. To take joy in the experiencing and expressing of Value continually (not continuously—we must remember the “law of alternation”) should be the formed attitude of the moral agent. *Thirdly*, the charge that this involves sentimentality and self-consciousness is met by an emphasis on the selflessness of true Value-experience and of its expression. We must consider the best examples of goodness that we know : to say that we must continually express Value is not to imply that we must be continually admiring ourselves

as doing so. *Fourthly*, it may be said that many are truly good who have never known such experiences of Value as we have described. I rather doubt that. The objection may be due either to an implied narrow and conventional standard of morality, or it may be due to the fact that Value has been experienced without its having been called by that name. The term must be interpreted extremely broadly, and we must not be misled by any man's professed agnosticism, "materialism" or even pessimism, if his actions give the lie to his creed.

So far we have consulted metaphysics and psychology and have tried to establish an ethical principle, the principle of the nature of goodness. There now remain to be touched certain ethical implications of this doctrine. The first is that of the nature of the supreme Good.

Historically, moral theories have frequently been the outcome of temperament, in a way familiar to all students of the history of ethics. The doctrine of self-realization seems perhaps the truest theory, emphasizing as it does all sides of personality. But its actual formulation is scarcely adequate. A better formula would be one which would include an implication of the existence of a *source* of self-realization or perfection. Self-realization or perfection is, after all, but a sign of adaptation to a wider universe of Value. The best formulation of the Good which includes the idea both of Value and of man's expression of it seems to be "realization of Value."

Two remarks may be offered. In the first place, the term "realization" has an ambiguity which is useful here. It may mean (a) mental realization or simply experience of Value; or it may mean (b) the actual externalizing or making real of a value in some material, the inspiration of which externalization is a previous experience of Value. The general formula "Value-realization" is intended to include both of these meanings.

We cannot say that the "Good" is simply experiencing something, nor would it be true to emphasize expression without experience. I take it that for the fullest realization, both of these alternations are required. The term "expression" must not be interpreted too rigidly: normally it is expression in some definite way, such as in paint, or words, or conduct. But the expression may be of a subtle kind; it may reveal itself as a kind of indefinable quality of personality.

In the second place, the above definition of Good includes not only moral but artistic realization. It would scarcely be true, I think, to add "and intellectual realization," because, although Value may be experienced through the activity of truth-seeking, the expression of intellectual truth is more of the nature of description, of analysis and synthesis, than of direct expression of Value in the sense described above. But the inclusion of artistic realization is important. The idea of the *Summum Bonum* has frequently had its content unduly narrowed by supposing it to be confined to the moral sphere. But although man is a moral being, he is more. It may be that morality is first in importance as a mode of realizing the Good. We are social moral beings before we are artists, and the development of artistic faculties is a specialization in a way in which morality is not. Nevertheless, to experience and to express beauty is a fundamental mode of realizing man's Good. This being so, we have to distinguish between realizing the Good, and realizing goodness or being good. The former may apply to artistic realization, the latter only to moral realization.

The further problem following directly upon the definition of the Good is that of the relation between goodness and rightness. So far we have concentrated mainly on goodness, regarding it simply as expression of universal Value in the material of conduct. The expressiveness of goodness is its inner side; but when there emerges an external act, other implications arise.

We experience and express each for ourselves. The expression, once made, involves complex social ramifications. This introduces us to the problem of rightness. We may describe goodness as expressive, but we cannot define rightness as this. For the man is not a law merely unto himself: he is a social being with social obligations and social duties. *E.g.*, to give alms to a beggar may be a spontaneous act, and it may seem intrinsically good. But in the end we cannot judge even of its goodness apart from consideration of the effects of alms-giving. In most ethical theories, right actions are defined as those which secure the Good. Assuming that this is sound, we should get "right actions are those which secure Value-realization." We may proceed at once to make some necessary amendments to this definition and to consider these in a few following sentences. The complete amended definition may, I think, best be expressed as follows:—"Completely right actions at any one time are those which secure the greatest possible amount of Value-realization."

Note in the first place that the definition says nothing about persons. Value, of course, is always realized through persons. But we cannot on the one hand introduce into a general formula considerations of differences as between one person and another, and we should not on the other hand, I think, show disregard for these actual differences by introducing any conception of justice such as the Utilitarian "everyone to count as one, and no one to count for more than one." The formula says "maximum amount of Value-realization," whether it be in one person or in another, or whether it be a greater amount in a few, or a lesser amount in many. This is all that a general formula can do. To attempt to modify it by inserting an "axiom" (so called) of justice would be to confuse practical with theoretic issues. It is no doubt true that the "axiom" of justice is a fairly reliable practical maxim. A's capacity for Value-realization may be greater than B's. (I think that everyone

must admit that this is possible.) But as A is unable to calculate with great certainty which of two courses of action, egoistic and altruistic, will produce more Value-realization, and as he naturally tends to exaggerate his own capacities, it is a sound practical rule for him to consider the claim of B as equal to his own. (I am presuming that he regards Value-realization, like happiness, as desirable.) Consideration of this practical maxim, however, need in no way affect the general formula of Good.

This brings us to the second point. Rightness is a matter of actual results, not of tendencies. Mill, it seems to me, confuses between the practical and the theoretical points of view when he defines right actions as those which *tend* to promote happiness. It may be true that in practice we only know tendencies, that general rules are but crystallizations of the experiences of tendencies in the past. But in theoretical ethics it is difficult to attach any other meaning to the term "right" than that it *actually* produces Good. That no one ever knows certainly what is truly right does not affect the question. We are seeking a general formula, not a practical rule.

Several other points with regard to the definition may simply be mentioned : (a) I use the term "completely" because there may be degrees of rightness, *i.e.*, one action may be more right than another because it produces more Good, but the completely right action produces the greatest possible amount of Good. (b) I say "at any one time" because circumstances at one time may admit of realization of a greater amount of Good than at another. (c) I say "possible" for the same reasons. It is actual and real, not absolute and ideal rightness of which we are speaking. (d) The term "amount of Value-realization" is no doubt clumsy, but is difficult to avoid. I take it that we know by direct experience what Value-realization means, and also that we know what "more or less" in this reference means. The distinction is, of course, really one of quantity and not of quality.

But the terms "more" or "less" do have a real significance, and there is no reason why we should not use them in defining right.

A number of questions (*e.g.*, those of subjective and objective rightness; of motive and intention; of how we know what is good or right, and whether by intuition or reason or both) must be left out of consideration here, although they are interesting from a systematic point of view. I may perhaps touch upon the question of the relations of rightness and goodness. Several relationships are possible between the goodness, the badness, the rightness and the wrongness of actions. Let us fix on two:—(1) the relation between an act which seems "right" and yet "bad" (or not good), and (2) between one which seems "wrong" and yet "good." In the first case (1) the act cannot be so right as it might be because in so far as it is bad (or not good) it is not an expression of Value by the agent. The total possible amount of Value-realization is less by that amount. *E.g.*, one might perform a socially beneficial act from a low motive, but in so far as the low motive cuts one off from personal realization of Value, the act is not only bad, but wrong. For realization of Value is the Good. The case (2) is rather more difficult. We saw how, in the case of indiscriminate alms-giving, the act might be a true individual expression of Value. It might be done from love and sympathy. But immediately we consider the good act as a whole, externalization as well as internal expressiveness, we begin to realize that though the goodness must be at least an individual expression of Value, it must also, to be fully good, be much more. It must, in fact, be right as well. Goodness and rightness are distinct but inseparable. The analogy, and the contrast, of art is interesting here. In expression, both in art and morals, there is a necessary limitation and modification by material factors. You cannot in art express with paint what you can express in bronze. So in morals it

would, I suppose, be impossible to make the life of a St. Francis out of the materials of a John Knox. But there is this difference. The artist can to some extent choose his material. In morals this is less possible, and moral material is on the whole less tractable. It is true that we may choose our friends and to some extent our life-work, but the materials of circumstance are largely not of our own choosing and it is out of them that we have to "make good." Any refusal to take what is given, to select our material so that expression becomes artificially easy, is to achieve a specious perfection which may in some sense be making an "art" out of life, but which is never "the real thing" in goodness. The man who does not realize fully what social obligations mean, or who shirks his duty for the sake of some pleasant display of his own "virtue," is not only thus far wrong and undutiful, he is less good. So in the end, as we saw, goodness and rightness are inseparable.

The considerations which have gone before may lead us to a tentative formulation of the ideal moral state of society.

Accounts of ideal and perfect states are apt to be unattractive, even nauseating. Many minds find it hard to correlate perfection with the life and movement which are the essence of the things we love. On the other hand there are of course those who—not necessarily because of any world-weariness—conceive that to postulate an actual or possible perfection of life is morally and intellectually necessary. Without discussing the merits of these standpoints, we may pass them by, and avoid the difficulty by considering the kind of perfection which is not absolute and self-contained but relative and functional. The perfection of creative morality may be regarded as that of a condition of affairs which would provide for the life of discovery and expression of Value, the life of creation which is never complete and continually new. It is a conceivable and partially imaginable Utopia, not where all men and women are perfect,

but where there is the least possible artificial hindrance to the life of discovery and creation, man's function. The attainment of such a condition would, of course, involve some radical alterations in social and industrial institutions: that problem is beyond the scope of this paper. We should remember, however, that it would be absence of *artificial* hindrances which would constitute the negative conditions of the ideal, not the absence of all difficulties, were that conceivable. The creative moral life, as we have seen, involves an action of mind upon opposing material. Everything we know of vital moral worth is grounded upon this opposition, and to conceive of a condition of things where it would be absent would be to conceive of something which would not be moral in any sense which we know. This is, however, no argument for abandoning to any degree the effort after the social reforms which aim at removing obstacles, and so making men's lives better and less burdensome. We must have faith enough—one might almost say commonsense enough—to suppose that reality will always be rich enough to yield the real difficulties and the real oppositions which make the creative life of goodness worth living.



*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C. 1, on March 17th, 1924, at 8 P.M.*

IX.—THE PROBLEMS OF RELIGION FOR THE MODERN ITALIAN IDEALISTS.

By C. PELLIZZI.

To a superficial observer it might seem that problems of religion play only a secondary part in modern Italian thought, and the view is widely held that this is due to the fact that Italy is a nation with one religious sect largely predominating over all others ; a country in which, therefore, the religious struggles and problems of the last four centuries have left no deep or lasting effects. I hold that such a view is almost the reverse of the fact, for two essential reasons ; first, that the mentality of the Reformation was not altogether a novelty in Italy in the XVIth Century, and probably the Catholic Dogma prevailed in that country chiefly because it had gone through an entire period of religious criticism and many thoughtful minds of the time found it safer and wiser to go back to the time-honoured standpoints of tradition and dogma ; second, that while Italy has had to undergo very few discussions on the interpretation of definite and particular points of dogma in the last centuries, she has been in consequence the more faced with problems which are fundamental to any religious belief and practice. While therefore Italy has been spared the daily fight of different sects, the passionate discussions on particular religious canons, her thinkers have found themselves confronted with the alternatives of being either thoroughly religious or not religious at all.

Let me mention here the problems which I regard as *central* in all Christian thought. They are, (1) the existence of an all-creative Spirit, in himself beyond the reach of human experience and reasoning, but of whose essence the human soul partakes by its origin and nature ; and (2) the title of *the* (or of *any*) " *Ecclesia Fidelium* " to consider itself the direct and unquestionable representative of such Spirit on earth. This is to say that, up to our own time, Italian thought has always been directly concerned with the problems of God and immortality, and with that

of the justification (or not) of a positive Church drawing its authority from above.

The two great schools of thought opposing each other in Italy towards the end of the XVIIIth Century were idealism and sensism, and both of them held the field up to the middle of last century, when positivism seemed to overthrow all other traditions of thought. Yet we find that even Roberto Ardigò, the well-known positivist thinker of Padua, who died a few years ago, was haunted all through his work, as some have rightly observed, by the ghost of God; he wanted either to accept or to deny it, but in any case God was his essential problem, and his whole system rather possesses the lines and character of a theology than those of a strictly philosophical work. His name remains the only one which deserves to be remembered, among the endless list of Italian positivists of the last period; and Benedetto Croce, to whom the end of positivism in Italy is largely due, somewhere writes about that, "half-century of philosophical barbarity" by which Italy was affected. Still, positivism had an influence on Italian thought, an influence not perhaps easy to be detected and defined in our days, but certainly very lasting and deep. It was a theology without God, a sort of crusade against the Catholic Church (also prompted by the political motives of those times), and, as such, it brought a large majority of the educated class of the country to free itself from all dogmatic and traditional ideas about religion. This point has to be emphasized, for it may throw a peculiar light on the developments of Italian idealism as we shall try to summarize them in this paper.

Croce, who may be regarded as the herald of a new era in Italian thought, has never himself as a philosopher found the problems of religion in his way; they have never presented any essential difficulty to his mind. Religion does not find any peculiar place for itself in his doctrine. In a small rare book by him, entitled *Contributo alla critica de me stesso*, he tells us how, having been born in a family of strictly observant

Catholics, and then educated in a college of Jesuit Fathers in Naples, he peacefully abandoned all religious practice or belief when about twenty, without feeling any emotion or remorse. In those days, attending the classes of Prof. Antonio Labriola at the University of Rome (Labriola has been almost the only original and intelligent student of Marx in Italy) he took a deep interest in social problems and doctrines, and was for a certain time in sympathy with socialism, so that, later on, he could write his book on the "historical materialism" of Marx. Besides these social and political interests, Croce confined himself, for a number of years in his youth, to travel and to philologic researches; and it is these researches which brought him face to face with the central problems of artistic and historic criticism. He had thought of himself as a pure student of history, chiefly literary, and he found he was essentially a philosopher only when he had almost completed the writing of his *Teoria dell'Estetica*. Then followed the *Logica*, the *Pratica*, and the *Teoria e storia della storiografia*, in the first years of this century.

The original spiritual motive of Croce was therefore chiefly of a philologic nature, and he first came to philosophy because he could not otherwise make his own philology clear and conclusive to himself. Given a definite subject of intellectual work, to which Croce had set himself, he felt that the existing conceptions did not provide him with any definite principle of judgment, or with any clear system of values. He had to do this work by himself, and he did it. His task was there, prompted by the special work he was interested in; his intellectual interest was confined to that task, such as it happened to be. Philosophy, therefore, means to him clearing away absurdities and superficialities, bringing precision and neatness of thought into the dark and dusty regions of the mind, putting order among clear and definite concepts. Religion has no special place in such a spiritual world; the mind is a kingdom that suffers neither alternatives nor rival powers; whatever falls within its borders belongs to it; all that

may be imagined to be outside is nonsense or irrelevance. Of course, by *mind* he does not mean the brain or the nervous system, nor the human individual as such.

Croce says that mind is either theoretical or practical; either reason or will; but also he warns us that, just as the theorist has always to depend on a set of volitional actions, if only in order to keep on living, so action is always preceded by a typical sort of judgment ("practical judgment") which does not carry any theoretical and universal value with it, and is very much of the same kind as the "pseudo-concepts" on which, according to him, the positive sciences are based. There is a knowledge of the particular (intuition-expression) which cannot be valued except on the ground of its immediacy and purity (*lyricism* in art), and a knowledge of universals (logic, *i.e.*, philosophy, in the technical sense) which has to be valued on the ground of its universality of meaning. In much the same way, the practical activity of mind can only be, either a will of particulars (economics), or a will of universals (morals). It is then self-evident that we cannot have any *moral philosophy* or *practical philosophy*, but only philosophical theories on morals and economics (on what we must think of these categories as such).

This "complete solid circle" of the mind in its pure forms, each of which depends upon the others and comes back to the others, may appear rather still and lifeless; but Croce warns us of the eternal and infinite motion of the mind, of its infinity and constant originality of work, so that the close "circle" is a sort of curriculum through which the whole of human history ever moves and passes. Therefore, our knowledge of the circle being of a philosophical nature, or, better, it being philosophy itself in its continuous life, the consequence follows that our moving consciousness of history (*la storiografia*) must be identified with our philosophic activity and mentality, though in a careful and discriminative manner. So, everybody is a philosopher, and some kind of philosophy is implicit in all acts of the mind;

philosophy itself lives and changes through the motion and change of life, *viz.*, of our consciousness of life. Croce's personal distrust (though this word may be somewhat exaggerated in the case) of all types of professional philosophers is nowadays one of the popular features of his personality. Philosophy, he would say, cannot be the privilege of any definite set of persons; it is not a sect which can have its priests and its liturgy.

I must apologize for having attempted to sum up in a few lines a vast and complex, and yet well-known, system of thought; but I can think of no other way of explaining how religion and its typical problems do not fit into Croce's general principles of philosophic thought. On various occasions he has clearly stated what he thinks of religion. He attaches to the word *mysticism* a most general meaning, and says that the so-called "religious experience" falls within its borders. For, either the principles and teachings of religious life are very clear and definite, and then they belong to history, they *are* history, and our consciousness of them is nothing but a philosophical one (and, therefore, having nothing transcendental about it); or else they are not clear and definite, but mere shadows or embryos of experience, and we cannot speak of them as data of the mind. They are only such experiences as our dreams consist of: they are definite and unquestionable experiences for us, but they are *dreams*.

Thinking along Croce's lines, one would say that religion and its problems are confined to the field of the "*pratica*." Religion is a matter of will; it is generally an arresting and impressive way of imposing moral and ethical canons on the people; its dogmas are the result of numberless accumulated experiences of practical life. Religion may also be a social substitute for that "will of the universal" which is the essence of morals, and can work well with all those who are not strong and broadminded enough to feel and find out the universals by themselves. But the aim of every self-conscious mind ought to be to set itself free from such an indirect and fictitious way of facing its own moral responsi-

bilities in life. If God is to be the all-embracing spirit of things and life, then He exists and is the most certain of things. He is mind itself. And all of us are immortals, in so far as we are conscious and self-conscious : for death itself comes within the range of our experience, and it may only mean anything to us as such : history, then, never drops any of our deeds, but gives them an everlasting effect ; for the world is *all full* and continuous, and nothing can be lost in it. A Church will then be the community of all believers in a definite practical creed, of all those who want to submit themselves entirely to certain ethical canons. And, certainly, there are religious men of a splendid morality ; yet Croce does not conceal that, to him, the perfect moral man is the man who draws all his canons out of his own consciousness and reason.

A peculiar test of the working of Croce's conception of morality and religion was afforded recently when the question was debated as to whether religious education should be re-introduced in the public elementary schools of Italy. Croce's view was, to put it roughly, that Catholic education in the elementary schools may be a good moral initiation of pupils to modern life, but that it is so is a purely practical judgment ; for, were the aims of our school education to be changed, we should have to revise our appreciation of the opportunity of realizing those new aims in Catholic education.

Croce starts his consideration of philosophical problems, so to say, from without. Looking at things, he finds always only ideas of things, that is, he finds that things are nothing but expressions or manifestations of the activity of the mind. He seems to be content with that, and, within the range of his pure categories, he leaves a world not very dissimilar from that of the positivist having its own life within the *spirito*.

Giovanni Gentile, on the contrary, starts straight from within ; from the very problem of that initiative, or activity, out of which the mind grows its own world and develops its own life ; from that initiative, which must be my own initiative, everybody's initiative,

here and now ; that is to say, from the point of the perfect adherence of myself to myself (a point that is ever changing, in spite of the perfect correspondence of each of its elements to all the others). To him, consciousness and will, knowledge and consciousness, are all one and the same thing. Croce read Hegel's works when he was about thirty years old, and when much of his own mentality was already quite formed ; Gentile, on the contrary, started as a University man, took his degree in philosophy at Pisa, and was the pupil of Prof. Donato Jaja, one of the few survivors of the old school of Italian idealists. Croce came to philosophy late in his life and, apparently, almost by accident ; Gentile was brought up in the study of St. Thomas and Vico, of Berkeley, Hume, Kant and Hegel. Croce assumes the all-inclusive *mind*, and sets himself to see how it works, to discover its pure forms, its universal categories ; Gentile is more of a metaphysician, he wants to know what this *mind* is itself, and why and how it can live as it actually lives. The two thinkers met almost by accident, and they did not very largely influence each other. They worked side by side for a good number of years on Croce's journal *La Critica*, then they found it necessary to separate, to separate most definitely, to take each his own mental responsibility for his own philosophy before students and the general public, though privately they have remained as good friends as ever. The difference in their philosophy arises, I should say, chiefly in the different attitude which each adopts towards the chief philosophical problems. The historic life of the mind being given, Croce wants to know what are its pure forms and how they work. For Gentile nothing is given, not even spirit. Nothing is *there* to be studied. Even *mind* itself is in doubt, whether it really exists and lives. His answer to this question is that the mind does not exist, but lives. Mind is life, not existence. It is life which, in its concrete form, is action (*hic et nunc*), but which can be action and concreteness, only because it always grows and moves, in front of itself. the purity

of some abstraction, of some existence and truth in itself. Our eternal doubting about the essence of the mind is itself a certainty of a spiritual kind; one may say that the consciousness of this self-doubt is self-consciousness; and that it is, therefore, an ever-changing spiritual reality. *Autocoscienza* is the eternal growth of the Ego in so far as it consciously *lives itself*. This Ego is nothing but pure act. Even the universal concepts are no longer such certain and safe things as Croce regards them; they grow and change with life; they are the ever-changing clearness of life in its continuous development.

Croce argues that Gentile's doctrine is a new form of mysticism. It is an inquest about the oneness of reality; a research for something *in itself*. It is therefore not a philosophy, not a general criticism of historic mentality, but only an involuntary attempt to revive the abhorred metaphysics. Let us state at once that Gentile's "pure act" does not represent an attempt to define either reality or life in themselves, as things at which we may look, as being distinct from our very act of considering them. The pure act is, above all, the result of a criticism and a method for further research. Its aim is to get to the development of self-consciousness in its most delicate intimacy: its conclusion is that the very centre of consciousness is not the clearness of the definite concept, but an eternal, and still an ever actual, drama, an everlasting contrast between two essential poles of life, two poles that we can separate and define separately only by way of abstraction. And these are, not the subject and the object, but *subjectivity* and *objectivity*: the two moments of spiritual life. Self-consciousness is the clear consciousness of their essential unity, and also of their essential opposition; but it represents an equilibrium that is never fixed and secure, for self-consciousness either throws itself on to objectivity, and by that way creates pure laws, pure concepts, and also the final, never completely attainable, perfection of pure being, of God; or else it gets stabilized (always abstractly) within the range of subjectivity, and

then it is all immediate, original and creative ; it is pure action. There is also a peculiar dialectic within the range of action, as there is a dialectic which is peculiar to the range of abstraction ; therefore, there is the logic of the concrete as well as the logic of the abstract.

Such being, in a few words, his basis of thought, Gentile visualizes religion and its problems from two different points of view, according to whether they are concerned with the problems of abstraction or with those of action. But, before all, he holds that his own doctrine is typically Christian, and that the essential meaning of Christianity ought to be developed in the way he indicates. As Gentile's chief concern is that the minds of men should be entirely conscious of their own creativeness and therefore of their all-inclusive responsibility, he finds a progress towards this end in all those doctrines which aim at ridding us of intellectualism, or of any conception that draws a sharp division between knowledge and what has to be known, or between consciousness (or knowledge) and will. He finds that Christian inspiration has been a turning point in the history of the mind, because it has made men participants of divine power and perfection, and it has suggested that such power and perfection are not in a definite place, but everywhere, and always in the making. The Christian prayer, "*Fiat voluntas tua*," means that such *will* is not complete yet ; it also means that the human mind is concerned with its realization. For a Christian, the reality which counts is no longer that which exists, but that which *must* exist : pure intellect is for him of no account : charity and love are all important. Gentile quotes St. Paul on this matter : "*Si linguis hominum loquar et angelorum, charitatem autem non habeam, factus sum velut aes sonans aut cymbalum tinniens. Et si . . . noverim mysteria omnia et omnem scientiam, et si habuero omnem fidem ita ut montes transferam, charitatem autem non habuero, nihil sum.*" And he comments : "True knowledge is therefore that love which sets the object of our

souls in front of us, within our own world ; whereas mere knowledge pre-supposes that object."*

From this he proceeds to assert most emphatically, towards the end of his *Logica*, that "il sapere, in quanto amore, è volere" ; knowledge, in so far as it is love, is will.† Brain and heart are not working on parallel lines, but on the same line, at the same work, for the same purposes. There is no room left for those philosophers, or theologians, who want to secure to religious inspiration the field of the "heart," leaving to reason the rest ; who would lay the foundations of religion on the experiences from within, on those non-logical truths that are prompted to us by sentiment. Sentiment is self-conscious, just as much as are logical judgments ; their distinction is an abstraction ; their concreteness is our actual conscious life. Moreover, the mind cannot be in any way passive, because then it would be nothing ; and, if it is active, but moved by two different sorts of inspirations, neither of them would ever have any real hint of the other ; we could not think and speak of them. The mind that gives rise to an everchanging infinity of forms must be a unique activity ; being one and active, it must ever go forward, it must ever aim at a realization of itself which stands beyond its actual completed attainments, its own actual (circular and self-enclosed) self-consciousness. To the mind there must always be, and there always is, a "something else" that has to be attained, or constructed, or reduced within the limits of clear and definite self-consciousness. There is always an *ideal* which has to be carried into practice : and one may very well say that such everlasting and everchanging ideal is God. This is Gentile's standpoint about religion, in so far as the concrete life of the mind is concerned.

*See G. Gentile, *Sistema di Logica come teoria del conoscere*, Vol. I, Bari, 1922. Pp. 29-30.

†*Ibid.* Vol. II, 1923, p. 213. See also p. 100 : "There is no reasoning, which is not a hearty feeling as well ; nor *vice versâ*" ; and the whole paragraph "La Ragione e il cuore", pp. 98-100.

Yet God can also and as well be an abstract logos ; He can be considered as the finitude of the infinite, or as *the* truth in itself, the insuperable purity of abstraction, the cyclic ideal of perfect knowledge. And, if once the human mind gets into a definite revelation of Him, into a close circle of religious inspiration and thought, then it will possess truth, so to say, but it will have lost life. But, is it not exactly the same whenever we adhere to a definite attainment of our critical thought, and find ourselves entirely satisfied with it ? Once we possess truth (or think that we possess it) we have lost the life of truth. The objective idea of God, therefore, as any definite conviction of ours, has to live through our experiences and actions, in order not to become a lifeless and empty abstraction ; it has to stand the continuous dialectic test of concreteness. This amounts to saying that it has to be an actual source of actions, an actual impulse.

The mind first creates its own limits, then overcomes them, and so realizes its own liberty. Every liberty has its boundary, but beyond every single boundary we must look for a greater liberty. In the same way, nature is always to our actions a limit, which we frame from time to time according to the actual powers and breadth of our consciousness ; but there is a divine inspiration peculiar to the mind, which compels it to try and get always beyond that limit ; such inspiration will be the basis of human action both in ethics and science, and, taken in itself and isolated in its abstractness, it is the object of the religious man's worship ; viz., of the worship of any *real* man.*

If such is religion, and if this ideal of God is something which always lies beyond what the living spirit has already fully realized in itself, it is a religion which would account for the existence and working of a Church rather than for the dogmas of an actually existing God. Religiosity cannot and ought not to remain indetermined, and, so to say, outside the concreteness of history. A religious man must belong to a positive religion, must be a member

*See also : G. Gentile, *Discorsi di Religione*, Florence, 1920.

of a definite Church. For the idealists a positive religion is necessary; so, rather would they start one by themselves than be accused of having none.. One cannot be *moral* unless one is *social*; so, one cannot be religious without accepting a definite liturgy and a positive creed.

Gentile, like most of the Italian idealists of to-day, has come to the conclusion that the Catholic creed is the one which approaches most closely his ideal of religiosity. A positive religion must be at every moment a definite set of creeds and practices, and in front of it the full actual life of the all-embracing *mind* has always something heretical in itself, because mind is always original and somehow revolutionary; but we have also to remember that all positive creeds live through heresies, just as the subjective mind lives always through objectivity. But in neither case is heresy intended or destined to destroy the dogma in what is essential to it; heresy will rather make it richer and deeper. The Italian idealists of to-day believe in heresies in much the same sense as they believe in dogmas. Such being the general attitude of their minds, they naturally sympathize with that religion and creed which is the wealthiest in dogmas and the most susceptible of heresies; and this is, as we pointed out, the Catholic religion.

It would take me far from the aims of this paper (which is meant to be purely informative, and to afford only a very general survey of the matter) to examine the many ways and occasions in which the very symbols and dogmas of the Catholic Church coincide with those symbols which the idealist himself is bound to use, or with the principles to which he attains. Even the dogma of the Trinity is adumbrated in Gentile's three moments of the abstract logos (which he derives from Hegel, though he radically changes the meaning of "objectivity," or nature, and changes much of the inspiration of the whole of Hegel's doctrine through his own concept of *actuality*), viz., subject, object and self-subject. The subject is a creative power, which is only and

truly itself through its creation, the object ; and, again, subject and object would be nothing if there were not, in every act of the mind, a reassertion of the subject beyond (or behind) the object. This is one example out of many which might be brought forward on the same point.

It is impossible to discuss here the influence which Maurice Blondel, in his book *L'Action*, has exercised on many Italian idealists ; I will only remark that the Vatican has not approved of Blondel's *L'Action*, and it does not approve of the general tendency of modern Italian idealism. This does not involve a merely empirical or historic question ; it creates a special philosophical problem of its own. The Italian idealists find themselves confronted with a positive religion which they would like to join *as idealists*, but which more or less definitely disclaims, and disapproves of, their theories. The philosophers are welcoming Dogma, but Dogma seems not to welcome them. Curious things are happening. Dr. Mario Casotti, whose works are known to some English students, seems to feel that a positive religion has to be got at from within, leaving all philosophical . . . prejudices at the door ; he is therefore actually practising, almost as an apprentice, in the Catholic Church. Prof. Armando Carlini, in his book *La vita dello spirito* (Florence, 1922), makes a very definite attempt to define the connexion between the ethics of *actual* idealism and the principles of Catholic religion. Some others, like De Ruggiero or Fazio-Allmayer, perhaps being personally more concerned with the lay origins and aims of idealism, would rather find a reciprocal irrelevance between idealism and the Catholic Church. In the last few months, Gentile himself, while reorganizing Catholic education in the Italian elementary schools, has been careful to avoid imposing the same sort of education on the public schools of a more advanced type. One of his critics has in consequence reproached him with the taunt " you impose the Crucifix on the ignorant, and your ' Immanent God ' on the educated." The

taunt is not itself free from criticism. It is true that the new type of idealism claims to have got rid of the old type of transcendency, but it is just as true to say that the immanence of which it speaks is no longer the old one. If for Gentile God is immanent from an abstract point of view of pure gnosis, He is transcendent from the abstract point of view of pure morality.

I venture to suggest that in this we have the real way out of the many difficulties which encumber the path from idealism to positive religion : taking up the moral point of view as a counter-balance to the merely gnostic point of view. By this method, the problem can also be visualized more definitely against its present historic background. Italy, we might say, is now faced with the problem of reconstructing the principle of authority in ethics just as much as in politics ; and, as a state and a nation have to be built on principles of authority which can be popular, and yet must be essentially rigid and dogmatic in themselves, so there is always a set of social and ethical canons which have to be set in a rigid way in order that any society may exist. This is no longer the problem of finding out the purest and highest moral precepts ; it is that of having some of them actually and constantly practised in a social milieu ; of having them at work as the basis on which a nation can live, a state can be built, and a new system of laws can be developed.

Gentile cannot say, as Croce certainly would, that “ *pratica* ” is one thing and “ *teoretica* ” another, and that the highest morality for a philosopher consists in his being as profound a philosopher as it is possible to be. Philosophy is for Gentile also the *moral* actual problem of life ; general practical problems of morality are its direct concern. Now we may point out that there is no problem more practical than that which concerns dogmas. A dogma is an attainment of the mind on which you are not allowed to work again with the tools of your criticism ; as a dogma, you have to follow and obey it without discussion. A Catholic would say that “ the spirit of evil is too clever not to

prompt us with a satisfactory reason for anything we want to do," that once a definite moral principle, therefore, has been attained by us, we must never allow ourselves to discuss it again. To this, an idealist would answer that a moral principle has to be lived through, always originally, here and now, if it is really to be a *moral* principle; and that this is so true that the Church itself has frequently had to reinterpret its own dogmas. But we urge in reply that the two points of view are not in direct contrast with each other. For the idealist, history is almost man's second nature (if not, and better perhaps, his *real* nature); and for the idealist also mind is not only a solid all-embracing unity in the present, but a living unity with all the past. Idealism, therefore, does not aim at maintaining that we may do or think whatever we like in the present, but that we are always responsible, in some way, for all that exists and all that has existed, *in the present*. The Church wants to emphasize that dogmas *are* dogmas, that duties are duties; to this, idealism adds that it is we who have always to make them such, here and now. The one gives the philosophical principle on which the moral teaching of the other may be based.

So far as our only aims as idealists are those of submitting pure criticisms of ideas, we are not concerned with the scope or purpose for which any church exists; it will then be left to churches to defend socially, their own moral dogmas against the social effects of our rational criticisms. But once we have put ourselves, as Gentile does, on the ground that reason and action are essentially and concretely one and the same thing, and that the quest for truth must be actually a quest for goodness in life, and *vice versa*, then we are no longer suffered to submit criticisms which are not prompted by a moral preoccupation and inspiration or which are not somehow restrained by a sense of moral responsibility. The difference between a man *as* a philosopher, and the same man *as* a devotee of a definite church, will then be only this: the devotee is *always* bound to a definite standard of moral

life, as his duty is not dependent upon a definite actual system of reasoning ; whilst the philosopher in his highest form can very well fall asleep from time to time ! “ Bonus aliquando dormitat Homerus ” ; none of us can be sure that he is always up to the highest standard of his life, and we all know that most men are just on the lowest scale of thought when they happen to try to make their consciences clear to themselves. Moreover, even when the philosopher is wide awake, he may add something to the moral dogmas of the past, but he will not throw them away altogether, if it is true that traditions will have to be understood and developed, but not discarded and undervalued by a real historian. Churches and dogmas correspond to a need of the moral life of the mind, which idealism can only understand and emphasize.

I will add a few final words on the Catholic dogmas of Grace and Revelation, which still seem to stand solidly against a spiritual “ rapprochement ” between idealism and the Catholic Church. Gentile would admit that there are, in a sense, such things as revelation and grace, but would affirm that they come from within ; there is no revelation of anything existing out of the world of mind, and there is no grace coming from outside our moral conscience. I would urge further that the tradition of Catholic thought is all against revelation and grace from within, because an “ outside world in itself ” has always been admitted till recent times. Catholic writers thought that moral principles of religion, having to be founded on the most solid ground, must have their foundations on the existing world in itself, and not on the wanderings and psychologic adventures of subjectivity as such. But if the Ego is no longer for us the mere source and basis of intellect and egoism, but simply the concrete home and *milieu* of all “ transcendental aims of life,” then revelation and grace may come to us, from within, much in the same sense, and with the same moral significance, as for the Catholic theologians they used to come from without.

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X. THE THOMISTIC OUTLOOK IN PHILOSOPHY.

By F. AVELING.

ALTHOUGH outside professedly scholastic circles some interest appears from time to time to be taken in scholastic philosophy, most contemporary thinkers seem to believe that scholasticism has its place only in the history of past systems of thought; or, if still living, is at best a stagnant pool in which, perhaps, some few good things may curiously be preserved amidst a mass of dead or dying theory. This widespread misconception can be traced back at least to the seventeenth century; and it is bound up with the rise and expansion of the physical sciences. But its real cause lies in the fault of the seventeenth century scholastics themselves and their immediate predecessors. They neglected the scientific discovery of their day even in relation to their own doctrines. They disregarded the developments of philosophical thought which were taking place around them. They were ignorant even of the traditional system which they themselves professed. All this gives point to such bitter attacks as those which Erasmus (1) launched upon the degenerate scholasticism of his time.

Their thought, instead of absorbing the new discoveries and thus swelling the current of earlier, robust scholasticism and flowing on with it, split up into a hundred rivulets which drained away from the main stream of scholastic theory and lost themselves in the quagmires of futile problems and slavish repetitions. The period has been referred to (2) as one of routine and exhaustion, characterized by a lack of all spirit of initiative. It in no way reflects the brilliant period of constructive synthesis which is represented by Bonaventure and Scotus, Albert the Great and St. Thomas Aquinas. It is therefore to the thirteenth century, rather than to the seventeenth, that we must turn for an appreciation of scholasticism, if we would avoid a misconception which is from the outset prejudicial.

But there is a second misconception, hardly less general than the one to which reference has been made, which, for the purpose of this paper, it is necessary to dissipate. Scholastic philosophy has often been misunderstood and in many ways ill-defined. But one of the most serious and prejudicial definitions is that which connects it necessarily with, and subordinates it to, Christian dogma.

In a sense such connexion and even subordination historically obtained between the two sciences. Christian theology is largely built up upon the scaffolding, and with the tools of, scholastic philosophy. The original Gospel teaching was developed and expanded by the application to it of philosophical doctrine and method. The interrelation of the two are both intimate and continuous in the process of the evolution of theology. From this point of view, therefore, there is much meaning in the saying *philosophia ancilla theologiæ*. Indeed, all theologies, from the very nature of the case, must be enmeshed in philosophy. The *Summa Theologica* of St. Thomas is an instance in point. It is a work, alike one in conception, design and realization. It is essentially theological, and has theology alone for its end. Yet it is intimately pervaded by a philosophy without which it would not hold together. Nevertheless, scholastic philosophy, and in particular Thomism, cannot be regarded as completely ancillary or servile to theology: even if it is difficult to separate the interwoven strands of the two sciences as presented in the finished texture of mediæval scholasticism. Considered as a purely rational discipline, scholastic philosophy has a subject-matter and a view point, a set of principles and a method, peculiarly its own. That it was dialectically employed in the defence of theological positions does not change its essential character. It can be disentangled from its theological implications, presented as a system, and judged on its own merits. Even in the cases in which its problems were originally set by theology (3), its solutions of them are theological only in the sense that dogmatic data enter into their premisses. The philosophical principles

and method can be examined apart and appreciated in so far as they offer a purely rational explanation of the topics dealt with. In common with other presentations of scholastic philosophy, Thomism is thus seen, in its origin also, to be radically different from Christian dogma, as a wholly natural science is different from one that lays claim to a supernatural source. Its findings rest upon principles and ratiocinations alike guaranteed—or presented as guaranteed—by evidential criteria; whereas those of theology are at least partially derived from sources with regard to which evidential criteria are inapplicable. It is important that this distinction should be understood, and that the autonomy and at least relative and formal independence with respect to dogma of scholasticism as a system of philosophy should be realized, if we are to grasp the significance of the Thomistic outlook in philosophy.

Of the two misconceptions noted, the latter is extrinsic to scholastic philosophy. But the former is intrinsic; and in part, at least, there is in the system of St. Thomas some cause for it. The physics of Aristotle, which were taught with scarcely any modification in the schools of his time, were seen later on to be treacherous and misleading; and the revolt against scholasticism did not stop short at physics. It is true that other systems of physics both with regard to sub-lunary and heavenly bodies, were worked out by scholastics before the decadence of scholasticism. Though not among those for whom credit for this is due (4), already in the thirteenth century Aquinas puts in a *caveat* with regard to the geo-centric theory currently held at this time (5). Nevertheless, in general, the scholastic physical theory was repudiated; and, with it, everything else in the scholastic synthesis of philosophy was thrown overboard. Except, possibly, logic; though even logic was eventually not to be without its critics. Bacon, for example, made an onslaught upon it. But Bacon had not read Aristotle, whose logic the scholastics followed; and most competent critics agree that his onslaught is negligible. It is true that, later, Mill attempted to do for the

science of thought what had already been accomplished for the physical sciences. But the assumptions of logic extend far more widely than those of any physical science; since all thoughts about all things, and the relations of thought to things and of the thinker to his thought, are implicated in it. Mill's attempt has had to bear its most formidable attacks precisely upon that issue. The latest attack has come from the pragmatists; but, in a world of changing science, the old logic has manfully held its own. For such reasons, and for the purpose of illustrating the outlook of St. Thomas Aquinas in philosophy, I propose to consider in this paper a point in his logical theory, and to develop several of the implications involved in it. For it is clearly evident that behind every logical system there is an implied system of epistemology, together with sets of postulates, or axioms, as to the character of reality, whether considered as object or as subject of knowledge.

These things are seldom explicitly stated; but they are always implied. And the reason of this is that logic cannot be formulated at all without some theory of general or universal terms (6). Illustrations of this are easy enough to find. Indeed, it is hardly possible to read some thirty or forty pages of any logic without already classifying the author under one or other of the four heads which denote the historical solutions of the problem.

That epistemology and even ontology are implied in any system of logic was seen by Aristotle. His psychological theory as to the genesis of the universal concept was devised to explain the fact of its occurrence as meaningful, and the nature of the reality which was to be credited to it. And this was certainly fully realized by Aquinas, who adopts, with significant modifications (7), the doctrine of the Acting Intellect, and points to the reality of the extra-mental individual existent, directly known to us in presentation, as the ground of the Universal (8).

Hence, "it has come to be recognized that the general philosophic view of thought is that upon which the character of logic as a science rests" (9). The foundations of logic must be

sought for and discovered elsewhere than in logic itself. It is wholly tributary, not only as to syllogism, but also as to judgment and even term, to its theory of the universal. It is worthy of note that the entire doctrine of the predicables is impossible without such a theory; and, without predicables not only is logic, but continuous human thought itself is impossible.

Logic, therefore, may well be taken for the purpose of illustrating the general outlook of Aquinas, because, though its present forms and manners of treatment are due to the accidents of their particular philosophical development and limitation, fundamentally it is, and must be, an epistemology linking up both psychology and ontology.

What, then, is the logical outlook of Aquinas? It is that of Aristotle: and, as far as purely formal logic goes, it does not differ from that of the Greek philosopher. This logical system is one, as Mr. Bosanquet has called it, of linear inference, in which abstracts, or universals, figure as the nerve of the thought progressions. Working "upwards" or "downwards" in reasoning, inductively or deductively, such universals are necessarily involved; and there is no rational process indeed, there is no intellectual activity at all in which they are not necessitated. There is, for St. Thomas, no direct intellectual grasp of the individual, or particular.

But such "linear inference" by no means excludes--on the contrary it rather connotes--"implication," to make further use of this fruitful distinction. The core of Aristotelian logic is the middle term of the syllogism, with which the other terms are qualitatively equated. Without this, the peripatetic logic, as summed up in the *dictum*, is meaningless; and this is clear from the fact that the fourth figure is deliberately excluded by Aristotle. The mutual inclusions and exclusions of the categories, considered or treated as predicables, implies a co-ordinated whole of relations in which the particular one under consideration in any judgment or ratiocination "implicates" all the others as terms of reference.

Nevertheless, logic, though it may imply "implication," is not "implication" in Mr. Bosanquet's sense, but syllogism. Now, in syllogism, terms do not stand for themselves; they stand for things. And it is clearly in the manner in which they are held to stand for things that logicians are most sharply differentiated. Aquinas's position here is that of mitigated, or moderate realism. The singular term stands for an individual, concrete thing—the sort of thing that can exist in reality, or at least be conceived of as such. The universal term stands for the nature (or quality, etc.) which is in each of the singulars; but, in so far as it is affected with the intention of universality (10), this comes not from them but from the mind considering them. None the less, the universal signified by the term is as real as the individual, or the particulars, from which it is abstracted; since it is the individual, or the particulars, looked at from a certain point of view. It does not add to them; on the contrary, it subtracts from them; and the residue is common to them all. Each one of them, in its concrete reality, *is* that residue, and more. For the mind in universalizing—and here Aquinas echoes Aristotle in making the problem a psychological one—does not falsify. To assert that Socrates is a man, and that Plato is a man, is to assert two truths; and in each of them less is asserted than could be asserted of either subject. The basis of such assertions, however, is not subjective caprice, but objective reality. For logic is not a dead skeleton of mere formalism, but a skeleton clothed in the living flesh of fact and experience. We never act illogically, though our premisses may oftentimes be wrong, if we come to think of them. Our feelings, or habits, or caprices, take the place of the middle term in our practical syllogisms.

It is accordingly in fact and experience that universals are to be accounted for, as well as individuals; and it is at this point that Aquinas differs from Aristotle.

I refer particularly to his doctrine concerning the multiplication of the species in its individual members; which doctrine *can*—and in the opinion of the present writer should—be applied

to all *propria* and accidents (11). In his Hertz lecture, read before the British Academy in December, 1921, Professor Stout defends the thesis, that, since characters are as particular as the things or substances they characterize, the universal is a distributive unity. By this he means "the unity of a class or kind as including its members or instances" (12). Though St. Thomas might not recognize classes or kinds, the thought underlying Stout's thesis would be quite familiar to him. Later scholastics, like philosophers of other schools, have been unconsciously influenced by positivist doctrine, which has its deep root in Bacon's system of induction. We now possess a better perspective than formerly of the Baconian claims; and know that Bacon, dazzled by the rise of the physical sciences, mistook description for explanation. In "the heroic age of physics" it has at last come again to be realized that explanation, in the proper sense of the term, is the task of philosophy (13); and that the similarity or resemblance upon which positivists and nominalists base their logical doctrine is in reality no more than mere description.

Stout has shown (14) the inadequacy of such a view, which will not even support the common meanings expressed in syncategorematic terms. The scholastic doctrine, however, is not one of resemblance, but of identity; and thus it escapes such facile criticism.

But what is the identity which in it is maintained—for identity may be variously interpreted? According to Aristotle, in the opinion at any rate of competent interpreters (15), the identity of the species, or specific form, upon which the logical universal is grounded is unique. There is numerically but *one* form in the species (genus, character, etc., is implied). And this is the view attributed also by Stout to Bradley, Bosanquet, Russell, McTaggart and Johnson. "The identity of the character," he writes, "is interpreted strictly and literally. There is no plurality of particular qualities corresponding to the plurality of particular things. The common quality is regarded as indivisibly single" (16). For St. Thomas, as for Stout, this view is, as is the former, quite

inacceptable. While Aristotle may conceivably be claimed as in some sense an idealist, Aquinas certainly cannot. He is a realist uncompromised. He is even an empiricist. He would rather subscribe to the thesis of Stout, and flatly declare that "a character characterizing a concrete thing or individual is as particular as the thing or individual which it characterizes" (17).

But is this not in reality nominalism? Why should it be? Professor Stout subscribes the doctrine and successfully defends himself against the charge of nominalism. It is quite clear that St. Thomas—who, in passing, was more interested in essences than in characters, and certainly would have disagreed with Stout in his notion of the structure of the individual—was no more a nominalist than he. And if we ask, what prevented him from being a nominalist, the answer is readily forthcoming. Names stand for things; but things can be viewed from more than one standpoint. They can be envisaged, as they actually exist in their individual concreteness, and named by properly "incommunicable" names—as John, Gabriel or God. But they—or some of them—can also be envisaged from the point of view of their "forms" (or of their "forms" as connoting "common matter," i.e., essences); and named by indifferently "communicable" names—as man, or tree, or earth. The philosophy of Aquinas is far too robust to deal in mere bloodless categories. Thus these names of "forms" existing individually in singular subjects, by which they are individuated, are common to many individuals either according to fact, or at least according to reason. Thus "human nature" is common to many, both as to fact and reason; whereas the nature of the sun ("solis") is not common to many according to fact, though it may be so according to reason; "for the nature of the sun can be understood *as if* it existed in several subjects; and this because the intellect understands the nature of any species by abstraction from the individual. And hence *existence* in one singular subject or in many is not involved in the understanding of the nature or essence of the species. And, therefore, without doing violence to the intellectual grasp of the

nature of the species, the nature of the sun can be understood as if it existed in several " (18).

We can see in this doctrine the escape from nominalism, no less clearly than in the famous passage of the *Summa* in which his logical consistency leads St. Thomas to the conclusion that, if the angels are not composed of matter and form, it is impossible that there should be more than one angel in a species (19). " The forms of any one species are not multiplied except according to matter " (20). The point is that they *are* multiplied; and that there are as many, numerically distinct, as there are individuals in the species— though this last is not constituted in the sense of class or group by the individuals which exemplify it. " Those things which agree specifically and differ numerically agree in form, but are materially distinguished. If, therefore, the angels are not composed of matter and form . . . it follows that it is impossible that there should be two angels of one species; just as it would be impossible to say that there were several separated whitenesses, or several humanities: since the whitenesses are not several, except in so far as they exist in several substances " (2). Specific differences and identities do not necessarily connote either " one " or " several " individuals. The nerve of Thomistic logic, as has been said, is not class-inclusion, but specific, as distinct from numeric, identity. The doctrine of the multiplication of the intellective principle of the human species is developed very fully by Aquinas (22); but it can be applied equally well to forms and characters which do not share in that subsistence with which he credits the human soul.

It will be observed that St. Thomas speaks of " forms existing in singular subjects." The general notion is derived as essence (quality, etc.) from individual existents. This distinction of essence and existence was fully worked out by the scholastics; as were the transcendental notions of the one, the true, the good, etc., which are convertible with that of being.

This theory of moderate realism runs like a thread, not only through logic, but through the whole of the Thomistic cosmology,

psychology and ontology. The cosmology we may here disregard as immature and, in many respects, definitely erroneous. Psychology and, ontology are not quite in the same case. And the reason for this seems to be, in respect of both these sciences, similar. The data of psychology are too immediate to allow of error (except, perhaps, in respect of principles employed in the systematic interpretation of them); and the generalizations of ontology, upon which these principles are based (and which, in turn, may be satisfactorily based upon psychological data) are too evidential, and too profoundly rooted in the convictions of mankind, to admit of much dispute.

I refer here to such notions as that of being and its transcendental equivalents, to such axioms as *agere sequitur esse*, to such distinctions as those drawn between substance and accidents, essence and existence, and the like. And in this connexion we may recall the fact that an abstract science, like mathematics, may be brought to relative perfection before the less abstract sciences of Nature. There is no *a priori* reason why ontology—though more abstract, even, than mathematics—should not have preceded the physical sciences in point of time, and yet hold good, as mathematics has. I suggest that the Comtist order of the historical evolution of science may be correct, and yet have a quite other interpretation than the one indicated by that philosopher:

The outlook of moderate realism in the Thomistic conception, as we have seen, is instanced in the theory of the derivation of the general notion from individual experiences, or things: and thus colours the entire metaphysical theory involved in this primarily logical necessity. Applied to material beings, it involves some such theory as that of hylomorphism to account for their intrinsic constitution; and it thus at once becomes an explanatory theory of all cosmological things, as well as a principle of classification. Nor does it break down when applied to simple intelligences. Aquinas considers the case—though he did not hold the opinion—in which these should be in some sense considered material. But,

even if purely immaterial, the principle holds. Here, as we have seen, the only *caveat* is that the individual must be the species. And, finally, when extended to the wider conceptions of general ontology, even essence may be looked on as a universal and considered as individualized by the act of existence. In the widest possible sense, all potency and act are conceived in similar relation; and only God is excepted from a composition that is common to all creatures.

But, throughout, the fact is never lost sight of that the individual—and the individual in a sensible world—is the true existent from which all human knowledge is derived. That—I know something—is the starting point, for Aquinas, of philosophy. And thus it comes to be seen how cosmology and psychology are so closely knit together in his theory. For, if our starting point is the individual, are we simply to say that its *esse* is *percipi* and thus raise the epistemological problem in its acutest form? To do so, of course, indicates the presupposition of a percipient—and a real one at that; but the question itself probably embodies the problem as it has actually come to all of us. What was the theory of St. Thomas in this matter; and in how far does it differ from that of Aristotle? The theory, as has been noted, is a psychological one, invented to account for the fact that, whatever “correspondence” there may be in our thoughts to things, we do discover universals in thought. They are meant, or, as Aquinas would say, *intende*.¹ Psychologically, this is a fact; and it is, for Aquinas, the explicit universalizing of the abstract. Now, for this the intelligible abstract, which is not given in sensory presentation, or intuition, is necessary. St. Thomas, following Aristotle, makes this the joint product of the phantasm (image or appearance) and the acting intellect (23); which faculty reveals the intelligible abstract individualized in the sensible concrete. Informed by this, the passive intellect passes into act and knows.

The solution is dramatically presented, and is crudely ontological. The faculty intellects are real and distinct manners in

which the soul acts : just as the senses, whether external or internal, are real and distinct ways in which the organism acts in the relation of knowing. They are hypotheses put forward to account for knowledge, and the differences actually discovered within knowledge. But Aquinas parts company with Aristotle when he makes all the faculties, or powers (to use his own term), powers of the individual. The acting intellect is as much a power of the individual man as is the passive ; and, if human souls survive death, it is as individual souls, and not as an impersonal one, that they franchise that barrier. Aquinas is a convinced Aristotelian : but the age long influence of Platonism, deriving mainly through St. Augustine, on the development of scholastic thought, the tremendous individualism of his time fostered by the ethics of Christianity, the sturdily empiric initial standpoint of his own philosophy, led him to read his Aristotle here through the eyes of Augustine, and made him, even more than the philosopher, the apostle of common sense.

It may be doubted, however, if common sense is a good title with which to characterize a system of philosophy ; or if the common sense of the thirteenth century in these matters can bear the burden of more recent criticism. How can this be faced by Thomistic theory ? Such a question would indicate a perverse conception of Thomism. No neo-scholastic or neo-thomist would blindly swear by the text of Aquinas. Indeed, St. Thomas himself has made the strongest protest against following the teaching of any one in philosophy (24). And he certainly had little hesitation himself in departing from the tradition of his predecessors. Philosophy has had its periods of development and retrogression ; but in the main it moves, lives, expands ; and the same recurring questions must be answered by succeeding generations of thinkers in a manner, to some extent at least, peculiarly their own. There are some professors of Thomism who do a positive disservice to the philosophy they advocate by their stagnation in forms of thought which are outgrown. But, if I am right in the main contention of this paper, the Thomistic

outlook in philosophy is not yet obsolete, nor outgrown. Let logic be criticized as it may, the nerve of the criticism must be logical. Otherwise it is disregarded; and, no matter how brilliant, assimilated to those occasional productions of paranoics which must have sometime or other fallen into the hands of most of the members of this Society. And logic does not stand alone. It implies a complete coherent and consistent philosophy. There is one point to which I have not made more than a passing allusion in this paper. Yet it appears to me to be one of great importance, and necessarily involved in any logical system as a presupposition to it. I refer to the percipient, the thinker, the syllogizer, the Ego. What sort of knowledge have we of this? St. Thomas has stated his solution of the problem of the thinker. The soul knows itself, as an existent, in every one of its acts; it knows its nature only by a diligent and subtle inquiry as to the nature of its acts (25). This is a distinction which recalls that of Mr. Russell between acquaintance and knowledge about. But the question, no matter how momentous its issues in philosophy, is one in which human authority may be fallible; and we are not authorized to take St. Thomas's word for it.

There has recently been a notable controversy between psychologists as to the self and its knowledge of itself. Into the details of this controversy, with which you are doubtless familiar, I need not enter here. Is the experienter, in virtue of Professor Spearman's first principle (26), immediately evoked from any lived experience? The question is one of fact, and ought to be one of the easiest in the world to answer. As a matter of common knowledge, it seems not to be so. And yet an affirmative answer to it is of so great importance for philosophy that not only can there be no justification for the principle of causality, otherwise than as a baseless postulate, without it; but also the very existence of the notion of causality cannot be explained.

Recent experimental work, however, in the region of the subjective appears to bear out the solution which Aquinas propounds for the problem of the percipient or thinker. The researches of

Ach (27), of Michotte and Prüm (28) and of Boyd Barrett (29), among others, make it clear that we experience an immediate consciousness of act, or of action. These phenomena (in my opinion the term is not here an altogether happy one) have been reported also by other investigators of the introspective school ; and, if indeed phenomenal, they are clearly the nuclear phenomena of the soul or Ego (30).

But I believe that the experience reported gives us directly more than a mere phenomenon. In several researches of my own, and in others which have been carried out by students in my laboratory, Subjects report certain mental processes which at first are exceedingly difficult to characterize. Ultimately, they come to be reported as consciousness of Self. This is in no sense consciousness of the developed conceptual self or of the self of sensory perception ; but rather the barest awareness of what is best described as an entity-Self, choosing, attending, deliberating, designating, or the like. All these terms are active ; and the consciousness of Self-doing-this-or-that might, perhaps, be called consciousness of act, or of action, as by the authors cited. But "action," as an abstract term, does not well fit the concrete experience, which is not a consciousness of action in the void, but of this definite concrete action, of this or that kind, here and now. Nor is the expression "consciousness of act" altogether free from objection ; for agent is logically implied by it ; and, moreover, "agent" by careful and repeated introspection is psychologically observable.

The experience in question is not analysable. It is in every case primitive, an immediate datum of consciousness, intuitively given, and no construct or inference. Its characterization by previous investigators as a phenomenon appears to be due to the influence of Kantian formularies ; and in fact, as in philosophy, the authority of Kant is no more necessarily to be followed than that of Aquinas. The first part of the statement of St. Thomas would, then, appear to have been borne out by experimental psychology. The second part is possibly not so easy to substantiate ;

for it means, for example, that the *same* soul or Ego that now chooses, a moment ago deliberated, and before that made a strong act of conation. Memory, time, identity, distinction of powers and substance, are all involved in the genesis of the concept of Self. Into these thorny questions there is no time to go in the present paper; though all have their relevance in any discussion of any philosophical outlook from the standpoint of logic. Theoretically, however, the continuous identity of Self may be supported by the psychological doctrine of the specious present, as James calls it; i.e., the non-punctual character of the mental "now." This "now," or time of presence, has a before and after, and must be considered as overlapping with its preceding and succeeding "nows"; thus providing a basis for intuitive continuity. And, indeed, though not so easy to observe as Self-in-action there is some experimental evidence even for this. Cases have been reported in which several "pulses" of activity, or several moments of consciousness of Self-in-act, were experienced within the temporal span of the specious present. This fact, though small evidence introspectively, is enough to provide a basis for the second part of Aquinas's statement; and it is from these successive intuitions that the notes are obtained which, when put together, constitute the concept of the Self.

It may be said in conclusion that the view point of St. Thomas, notwithstanding the cavil of Locke, is that the object of knowledge is first known merely as a bare and confused entity; and that this intuition is only gradually filled in and completed by a laborious course of investigation as to what that entity *does*—how that entity acts. Substitute subject for object, since the subject knowing itself is object also in the relation of knowing. It is only by a "diligent research" that it can come to the knowledge of its nature, or essence, or definition. But, from the first act that it performs, its existence—and, inchoately, that essence—is known. And this is of the greatest importance for the logical theory of St. Thomas; since, for him, all demonstration requires that the thinker, as an essence, and the knower, as a reality, exists.

REFERENCES FOR THE THOMISTIC OUTLOOK IN PHILOSOPHY.

- (1) Cf. *The Praise of Folly*.
- (2) De Wulf (tr. Coffey); *History of Medieval Philosophy*, p. 462.
- (3) As, e.g., in the early Christological controversies, or with regard to the nature of the change in the eucharist.
- (4) Richard of Middleton, William of Occam, Buridan, Albert of Saxony, Oresme; (roughly from 1277 to 1377).
- (5) *Summa Theologica*; 1a; 115; 3.
- (6) "The universal must manifest itself as the characteristic feature in all the important products of thinking—the notion, the judgment, the syllogism." Joseph; *Logic*.
- (7) *Summa Theologica*; 1a; 79; 3, 4 and 5.
- (8) *Ibid*; 1a; 84; 6.
- (9) Article "Logic," in *Encyclopedia Britannica*.
- (10) *Summa Theologica*; 1a; 85; 2 ad 2.
- (11) *Ibid*; 1a; 50; 4; ". . . sicut etiam impossibile esset dicere quod essent plures albedines separatae . . . cum albedines non sunt plures, nisi secundum quod sunt in pluribus substantiis."
- (12) Stout; *The Nature of Universals and Propositions*; p. 4.
- (13) Cf. Rutherford; Presidential Address, British Association, 1923.
- (14) *The Nature of Universals and Propositions*.
- (15) Cf. Ross; *Aristotle*.
- (16) *The Nature of Universals and Propositions*, p. 4.
- (17) *Ibid*.
- (18) *Summa Theologica*; 1a; 13; 9.
- (19) *Ibid*.; 1a; 50; 4.
- (20) *Ibid*.; 1a; 41; 6.
- (21) *Ibid*.; 1a; 50; 4.
- (22) *Ibid*.; 1a; 76; 2.
- (23) *Ibid*.; 1a; 79; 5, sed contra. ". . ." "Philosophus dicit. (in 3 de Anima, text. 18), quod intellectus agens est sicut lumen. Non autem est idem lumen in diversis illuminatis. Ergo non est idem intellectus agens in diversis hominibus." He ignores Aristotle's other presentation of the acting intellect here.
- (24) *Ibid*; 1a; 1; 8; ad 2 ". . . licet locus ab auctoritate quae fundatur super ratione humana sit infirmissimus."
- (25) *Ibid*; 1a; 87; 1.
- (26) Spearman; *The Nature of "Intelligence" and the Principles of Cognition*, p. 54, sq.
- (27) *Über die Willenstätigkeit und das Denken*.
- (28) *Étude expérimentale sur le choix volontaire et ses antécédents immédiats*.
- (29) *Motive-force and Motivation-tracks*.
- (30) These terms are not used synonymously; but the distinction cannot be drawn and argued in this paper.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C. 1, on May 5th, 1924, at 8 P.M.*

XI.—PRAYER: PSYCHOLOGICALLY AND METAPHYSICALLY CONSIDERED.

By ALBERT A. COCK.

I.

DR. CARR's paper in January (p. 77) forms an excellent introduction for anyone who wishes, as I do, to raise the problem of prayer in a philosophical discussion. Dr. Carr has for his problem, the fact of intercourse, particularly of "intercourse between individuals whose essential nature is that their experience is personal and uninterchangeable." Dr. Carr thereupon asks what is language? I would ask, does not the fact of intercourse between individuals whose essential nature is that their experience is personal and uninterchangeable, does not this fact itself imply an abiding petitionary factor in all experience, and, particularly, does not speech, whether it be speech of repetition, or speech of reconstruction, or speech of invention, creative speech, remain for finite individuals ever petitionary? Dr. Carr writes that there is "always an inner *need* of giving expression to our inward intuition;" that "we cannot free ourselves from the *need* of an active co-ordination of the universe," and that "it is in that *need* that experience arises" (p. 83, italics mine). When Dr. Carr writes thus of the need for an active co-ordination of the universe, we might perhaps expect this to include inter-subjective intercourse with other monads than our own finite selves, inter-subjective intercourse it might be with spirits gone before, and above all inter-subjective intercourse with God, the divine monad. All this might reasonably appear to be implied in any active co-ordination of and co-operation with the universe, but apparently this is not necessarily so in Dr. Carr's view, for he writes that "we cannot appeal to a transcendent cause." Perhaps he might fairly reply that since, in his own words, "the subject-object relation is wider and more fundamental and different in its whole bearing from the mind-body relation" he is excused for

the present from dealing with prayer though prayer is manifestly not only a case of subject-object relation but also a case of inter-monadic intercourse in which speech interior or externalized is commonly involved. "Speech is expression. Self-expression is already speech though the individual mind have no audience but itself." Whether the individual mind can ever have no audience but itself may be doubted, but it suffices to note here that to be in any audience implies at least one speaker and one listener, and "that's enough for fifty hopes and fears."

It is difficult and it might be presumptuous to avoid dealing with the psychological problem of prayer without some reference to Dr. R. R. Marett's famous essay "From Spell to Prayer" in *The Threshold of Religion*. For Dr. Marett religion is a mode of social behaviour and the object of religion is whatever is perceived as a mystery and is treated accordingly. In striking anticipation of the main thesis of Rudolf Otto's book *Das Heilige*,* Marett finds the historical genesis of religion in the awe caused in man's mind by the perception of the supernatural (i.e., the supernormal) as it occurs *within* and without him, and he criticizes Frazer for ignoring "the possibility of the origin of the idea of the *mana* itself in the inward experience that goes with the exercise of developed magic." Marett himself then proceeds to account for prayer as the natural sequel (largely due to the operation of personification) to spell. Magic and religion must be blood-relations, for otherwise the use made by magic of ritual and ritual sayings and of optatives would be "psychologically next door to impossible" (*op. cit.* p. 66). Reflection on the occult working of a spell will generate the notion of external divine agency, and this in its turn will give rise to prayer. The imperative of magic will develop (or degenerate?) into the optative of prayer. Marett declines to recognize any "prayer" value in an imperative. The mere repetition of a formula—"Fruit, fruit, fruit" is his example—is "no prayer so long as the force which sets the spell in motion is *felt* by the

* My references will be from E. trs. *The Idea of the Holy*.

operator as an exertion of imperative will and an attempt to establish control. But, given a form of words which need suffer no change though the *thought** at the back of it alter, what more natural than that the mind of the charmer should fluctuate between bluff and blandishment, conjuration and cajolery? "No wonder that Marett guards himself elsewhere in his essay by saying that "all this is easier to deduce than to verify." The reason why such writers fail to perceive that even spell and magic are forms of prayer having a value of their own, though of doubtful religious and metaphysical validity, is that they omit to distinguish in this connexion knowledge by acquaintance and knowledge by description. The savage practising magic or weaving a spell has an experience which to the anthropologist or sociologist observing him represents a pseudo-knowledge-about, but to the spell-doctor, the spell-bound savage enjoying his own experience it is real knowledge by acquaintance, the *form* of which is petitionary as is the form of any experience that is incomplete. Prayer in the narrower sense differs from spell and magic in its noetic value and validity. Degrees of prayer are degrees of noetic synthesis, noetic value and noetic validity; and the prayer of union is ultimately pure experience, pure knowledge by acquaintance and compresence which ceases to have a petitionary character so long as the union (or the ecstasy into which it may pass) endures.

Galloway,† while he admits that there is no hard and fast line between spells and prayers, hovers between accepting Marett's sequence from spell to prayer and the degradation of prayer to spell through its fixation in words. In his earlier work, Galloway regards prayer as "probably an appeal to the spirits in moments of stress and danger:" belief in the power of the word was such that prayer became a fixed and intoned formula which assumed

* Note Marett's change from "felt" to "thought."

† *Principles of Religious Development*, 1909, and also *Philosophy of Religion*, 1914.

a magical efficacy. Nevertheless, the "evolution of prayer from the sensuous to the spiritual depended on the progressive elimination of the magical idea and the growth of the notion of spiritual communion." In his later work, Galloway defines prayer as "one of those religious acts which are practised wherever religion exists. It is the instinctive cry of the human soul to a power that can help it in its time of need." So defined, prayer could include any petition for help to any potential helper. The content of prayers reflects the values which are accepted in the social environment. But, indeed, it does not appear to me greatly to aid the modern man, sceptic or believer in regard to prayer, to press upon him accounts of the evolution of prayer amongst primitive men. The study of origins here appears to me to have but little bearing upon the meaning and validity of prayer for a modern civilized worshipper, and, in any case, origins and validity must not be confused or identified. It is no disgrace to religion that magic is (or may be) its "blood-relation," rather the credit of the one reduces the discredit of the other. Prayers are not spells, but they are the spellings of individual and social needs; spellings, secret or vocal, in the ear of the Being or beings addressed, and progressively corrected and purified as the idea of the Being addressed is itself corrected and purified. Caricature in theology must mean caricature in prayer.

Thouless,* in making a distinction between worship and prayer, regards the former as public and collective, and the latter as private and individual. Prayer, he thinks, is always in its first intention objective and essentially directed towards a super-human being in the belief that it is heard by the being to whom it is addressed. Its mental effects, though extremely interesting to the psychologist, are incidental, not primarily intended. The psychology of auto-suggestion as set forth by the Nancy School is found to apply to prayer by Thouless, who discerns a correspondence between *le recueillement*, *la contention* and other states

* *Introduction to the Psychology of Religion*, ch. xii.

described by Baudouin, and the Christian mystic's use of the phrase "the prayer of simplicity" or of the Yogis' use of the term *Dharana*. In its subjective effects, therefore, prayer seems to be "clearly of the nature of reflective auto-suggestion undertaken with the intention of bringing about changes in that sum of mental disposition which we call character." Later, Thouless describes prayer as "any mental exercise whose aim is religious, or any mental state of religious character." The first definition would include any form of non-religious mental exercise in which mental and moral culture alone are desired, the second definition requires prayer to be specifically religious, i.e., addressed to some being who hears. It might save some confusion here, especially in view of the elaborate terminology in use in regard to kinds and degrees of prayer to suggest that, from our standpoint, there are four major levels of prayer:—(i) the egocentric, which in its purest form is of ethical intention; (ii) the anthropocentric (or perhaps the philanthropic) which in its purest form is altruistic in intention; (iii) the ego-theocentric, which is chiefly intellectual in its intention; and (iv) the theocentric, which is pre-eminently aesthetic and increasingly unitive in character. From very rudimentary prayers commonly called "acts," which Thouless and other psychologists regard as almost wholly auto-suggestive, we may pass in review successive differentiations of attention directed upon God. Vocal prayers assist in forming habits of recollection, special devotions or litanies assist in developing the power of concentration, and systematic meditations are forms of mental prayer, discursive or compressed in which memory, imagination, intellect, emotion and will are all successively or concurrently engaged and exercised, with whatever bodily postures and control of breathing may be prescribed by the director or found serviceable by the meditator. Such meditations have a general God-ward intention and also a particular and personal goal—the determination of a vocation, or the continuing consecration in a vocation already discovered and adopted.

According as the individual is either gifted or habituated, discursive meditation becomes more and more concentrated, less and less discursive, until it assumes the form of prayer of simplicity or acquired contemplation. Thouless rightly recommends distinguishing between the prayer of simplicity and the prayer of quiet. The former is acquired, voluntarily reached and voluntarily left and its control is voluntarily varied. The more mystical prayer of quiet is bestowed as a grace and is very little within control. Thouless, following Poulain, regards all forms of mystical prayer as different in kind, though not necessarily in every detail of content or of form, from discursive prayer. "Mystic prayer," says Poulain, "our own industry is powerless to produce, even in a low degree, even momentarily."* All such states are supernatural in character; are, in differing degrees, contemplative, are frequently for awhile in opposition to or hindered by discursive or directed thinking (the opposition is technically known as the ligature), and culminate in union, ecstasy and spiritual marriage. The prayer of quiet (St. Teresa's fifth "mansion") comes at first spasmodically and is subject to distractions but with repetitions of the experience the spirit can ignore them. Following this is the prayer of union which is free from all distractions "the soul has died to this world, to live more truly than ever in God." Ecstasy, with or without remarkable bodily effects, and it is a state difficult to describe. The Sadhu† lays great stress upon the fact that in his ecstasies his vision is always essentially the same, yet ineffable, though not a dream, and always Christocentric. The Sahdu finds his ecstasies as a Christian healthy and calm, unlike those he experienced as a Yogi. Upon the real simplicity of the ecstasy and its consequently indescribable character we may note that "to the poet life is full of visions, to the mystic it is one vision."‡ The state

* Poulain: *Graces of Interior Prayer*: 3rd English Edition.

† *The Sadhu*, Streeter and Appasamy.

‡ Article on Francis Thompson: *Dublin Review* 1911.

called spiritual marriage, consummated union or deification is described in St. Teresa's seventh mansion.* In this state the ecstatic excitation disappears and an almost permanent union (deification) is formed so that activity and abiding contemplation now aid one another : ligature has disappeared. There is also in the spiritual marriage a high degree of consciousness of God's compresence, "the soul participates in the divine life, in those analogous acts that are in God." (Poulain, p. 287.) There emerges, finally, a permanent intellectual vision of the Divine Nature, of the Trinity. Care must be taken to avoid misjudging this sublime state and particularly from regarding it as "useless" or "dangerous." The fact is that ecstasy is the critical danger point, the mystic is in calm seas thereafter and the fruits of the spiritual marriage are works of heroic virtue ; witness the lives of St. Teresa, St. John of the Cross, and St. Catherine of Genoa (the last, be it remembered, a widow).

The ligature, however, is a phenomenon of extreme psychological interest and it needs a fuller reference here. It is described by St. Teresa (*Relations* and sixth "*Mansion*"), by St. John of the Cross (annotations to his poems), by Blossius, by Blessed Margaret Mary, by Bossuet and others. The term ligature does not signify suppression of the understanding or even of the will, but rather interruption of these faculties in their ordinary application, diversion Godwards and rivetting thereto. "One thing only can be done ; to receive what God gives. We are bound with regard to all beside." St. Catherine of Siena could not complete the Lord's Prayer without falling into a trance ; for Blessed Mary of the Incarnation the divine attraction was so great that, at the age of twenty-two, she could neither continue in reading nor say a single Ave without difficulty ; Blessed Margaret Mary used every effort to escape from this state but in vain, St. Teresa says that some people cannot discourse as they did before about the mysteries of the Passion and Life of Christ ; "I cannot account

* See also *The Fiery S. Iloquy with God* : by Gerlac Petersen.

for this," she writes, "but it is very usual for the mind to remain less apt for meditation." Poulain summarizes the facts by saying that the mystic state of (supernatural) "prayer usually has a tendency to exclude everything that is foreign to it, especially such things as proceed from our own industry or effort." It is an "impediment experienced with regard to the *voluntary* production of additional acts during the mystic state."* The ligature would thus appear to be an extreme instance of the operation of the law of systematic association and systematic inhibition with regard to a mental system, in this case, a system of supreme interest, both objective and subjective, to its possessor. Poulain gives three rules of conduct in regard to the ligature: (1) not to attempt violently to produce the obstructed acts; (2) to accept those acts which are practicable (thus avoiding quietism); (3) to utilize to the full the moments when the ligature is less binding, less obstructive, *i.e.*, when released, even for a transient spell, hasten to acts of vocal, discursive, reflective prayer or worship. These rules, he says, enable us to reconcile the powerlessness of the mystic state with the duty of honouring and loving our Lord.

II.

So far, I have very briefly summarized the investigations as to the origins of and the various forms assumed by prayer set forth by Marett, Thouless, Poulain and others. None of these seem to me to show in what manner, perhaps, as I shall try to show, experience itself necessarily includes a prayer factor (hints of which I found in Dr. Carr's paper). Two or three other important contributions to our subject, however, call for reference before our own view of the petitionary character of all experience is set forth. In this section, therefore, I shall touch upon J. B. Pratt's views in his book *The Religious Consciousness*,† upon Sir Charles Eliot's account of meditation in his three massive

* Poulain, *op. cit.* 180 ff. For Wordsworth's account, see Section II.

† Macmillan, 1920.

volumes on *Hinduism and Buddhism** and upon the remarkable *Sonnets from the Persian* translated by Sir Cecil Spring-Rice shortly before his death.†

A.

It is noteworthy that Pratt, in his excellent book, treats of prayer, in the first of a series of chapters (closing his work) which culminate in a consideration of mystical experience and particularly of ecstasy. I think this is in a way regrettable. To me, if prayer have any psychological value and metaphysical validity, it ought not to be regarded as so different in kind from every-day experiences of a thoroughly normal character, nor should the mystical life be regarded as essentially different in kind (though certainly in degree) from every-day life. But Pratt, defining religion as "the serious and social attitude of individuals or communities toward the power or powers which they conceive as having ultimate control over their interests or destinies," proceeds to regard prayer as the characteristic form of private worship (chapters 15-20). He does not regard the views of Marett and Wundt as conclusive, rightly objecting to any attempt to argue from the chronological to the causal. He regards wordless prayer (like imageless thinking) as possible only for the mystically inclined, and he prefers to think of prayer as a form of expression, quoting a fine sentence from Cooley, "that the mind lives in perpetual conversation." He finds the great external cause of prayer in the instruction and example which children receive; the internal cause of prayer appears (to Pratt) to be some interior need or necessity. Scepticism, indifference, fatigue, and a sense of unworthiness appear to be the main causes of discontinuance of prayer. I should agree here, in the sense that "he who says he cannot pray is too often one who will not pray, and he will not pray because he does not want to do so:" but

* Edward Arnold, 1921.

† These sonnets were afterwards published in the *Dublin Review*, but I have not been able to ascertain whether they are now separately printed.

this cannot be a logical argument against either the practice or the validity of prayer. Because a need is not realized it does not follow that it does not exist. The subjective, and even the objective efficacy of prayer seems to Pratt to be indisputable, and he refers to a significant sentence from Emerson, "What we pray to ourselves for is always granted." Indeed, from the point of view that I wish to develop, we are always praying either to a deity, or to a devil, or to some saints, living or passed away, or to ourselves. Petitional prayer presently passes, for Pratt, into prayer of communion, and this he regards as neither negative nor simply imitative but really positive and sometimes even a violent experience. The positive and even violent character of the experience of prayer of communion is indeed marked throughout the literature of mysticism and of hymnody: specially good examples of it, outside the Bible, may be seen in Gerlac Petersen's *Fiery Soliloquy* and in Spring-Rice's *Sonnets from the Persian*. The essential mark of prayer of communion seems to lie in "the unification of consciousness," frequently through æsthetic contemplation of God. Although the subjective value of prayer and particularly of meditation as a form of interior self-culture is so great that it is often continued regardless of the problem of validity, yet Pratt recognizes that these high subjective values in prayer ultimately rest directly or indirectly upon some real faith in the objective relation. If, then, metaphysics were to invalidate the claim of prayer to have a real objective relation, to invalidate the claim of religion, whether theistic, monotheistic or polytheistic, to objective reality, it is clear that the subjective value of prayer would in time evaporate and Pratt says plainly that "if the subjective value of prayer be all the value it has, we wise psychologists of religion had best keep the fact to ourselves: otherwise the game will soon be up and we shall have no religion left to psychologize about. We shall have killed the goose that laid the golden egg." We cannot, then, be content merely to identify prayer with "meditative self-realization." Aspiration

for the higher life, interior recollection and detachment with its bodily concomitants ("cœnæsthesia and the feeling of the bodily rhythms" is Pratt's phrase; "spasms of the ganglia" is the more expressive if ruder phrase of Hawker of Morwenstow, who knew what it was to pray) and the evaporation of individuality are for us very rudimentary forms of prayer. Hocking's simple rational account of prayer,* "a voluntary recollection of those deepest principles of will or preference which the activities of living tend to obscure," seems to me too impersonal, and when Stanley Hall concludes that "the culmination of prayer is . . . analogous to the hedonic narcosis that Schopenhauer ascribes to the most intense æsthetic contemplation with surcease of all pain . . . this makes prayer the opener of new and higher ways, the purest psychic expression of the *evolutionary push-up*† in us," it is difficult not to feel that such an expression as that prayer is the purest manifestation of a "push-up" is pure bathos.

But in Buddhism, according to Sir Charles Eliot,‡ meditation ranks above sacrifice and prayer. It is an effort the object of which is isolation or detachment and calm. In its early stages meditation is aided by the strict observance of the eight-fold way including regulation of the breath, bodily postures, and retraction of the senses. In its later stages, concentration upon an object leads to identity therewith, rising to a trance. Attainment of miraculous powers sometimes follows, and emancipation from the world is made permanent by death. Eliot finds in this a strong affinity to æsthetic contemplation. The dark night of the soul, so prominent in some Western mystics, is, he thinks, much less so in the East but it is known and recorded in poetry. On the other hand there appears to be a great likeness between the spiritual marriage described by St. Teresa and the *pratiḥhā* or sudden illumination of Eastern mystics, and corresponding to the

* Quoted by Pratt, p. 330.

† Italics mine.

‡ *Op. cit.* vol. i, cxiv.

locutions and revelations of mystical prayer in the West are the "heavenly music," "thought reading" and *iddhi* or marvels of Buddhist meditation in its more exalted forms. The remembrance of previous lives and deaths, and of the previous lives of others, has, however, no parallel in Christian ecstasy and locutions. As in the West, so in the East, the practice of concentrated prayer and meditation is found to be not incompatible with a life of great and beneficent activity* and Eliot emphasizes the practical character of the prayer life. But his final conclusion is notable and bears forcibly upon our problem of the ultimate validity of prayer. There is, Sir Charles Eliot declares, substantial identity of form between Buddhist and Christian meditation—the experiences, the analyses, and the results thereof are impressively similar to each other—but Buddhist mysticism and prayer life are definitely non-theistic, rest upon a non-theistic metaphysic, hence (Eliot infers) theism, pantheism, and a-theism are "indifferent to this happy state." One would like to have the Sadhu's comments upon this conclusion. I am loth to think that prayer, in any case, is only a special form of ethical self-discipline, or that it is a special mode of aesthetic contemplation: I am prepared to believe that there are many paths up the hill of the Lord, but I hope there is only one hill and that it is the Lord's hill and not merely a subjective erection.

B.

"As human beings," wrote Dr. Carr in the paper before alluded to, "we cannot free ourselves from the need of an active co-ordination of the universe, it is a condition of our agency in it, and it is in that need that experience arises." Link this to Dr. James Ward's definitions of experience, and light will be thrown upon the first three of Sir Cecil Spring-Rice's *Sonnets from the Persian*. Experience, Ward defines as the process of becoming expert by experiment. It must therefore clearly be purposive

* Cf. Kipling's story, *The Miracle of Purun Bhagat*.

and is throughout constituted of two factors in inseparable relation, the percipient subject and the perceived presentation.* In the following translations from the Persian version of the poetry of Husayn al Hallaj, an Arab mystic, we have first the presentation, the call, the attraction of God to the subject, "a mean and abject thing." Subject and object thus related are drawn continuously close together by the moving power of love until there is deification of the subject, attraction rapidly passes into attention and attention into absorption; yet, since it is the finite and the infinite that are thus related, the contemplative absorption is not such as to exclude all further activity: the co-ordination of the universe having been thus effected for this mystic there is expression, self-expression through speech with an audience *other* than itself, speech, to wit, with whomsoever will listen and listening, understand: even in the hour of his last torments he exhorted those around him not to doubt the Divine goodness on account of his sufferings—"God herein treats me as a friend treats his friend—He passes to me the Cup of suffering which He has first drunk Himself." The sonnets were composed by Husayn in the interval between his condemnation and his crucifixion, and the translations were made by Sir Cecil Spring-Rice during the last hours before he left Washington for certain death in Ottawa.†

(I)

The voice from heaven crying in the night :
 " My soul is weary of My lonely throne ;
 Unloved is he who owns the world alone
 In sole, supreme, and solitary night.
 One crowning wonder yet remains to do ;
 Behold I make this mean and crumbling clod
 The loved and lover of almighty God,
 Almighty in power, almighty in loving too.

* *Psychological Principles.*

† These sonnets appeared in the *Dublin Review*, 1918. The original author, an Arab mystic of the 10th century, was crucified at Baghdad.

Behold I call my creature, even thee,
 The poor, the frail, the sinful, and the sad ;
 And with My glory, I will make thee glad ;
 Come unto Me, My friend, come unto Me ! ”
 Even so the voice from heaven, I heard and came,
 And veiled my face and plunged into the flame.

(II)

Last night I lived a mean and abject thing,
 Content in bondage, glad and prison-bound,
 With greedy fingers blindly groping round
 For such brief comfort as the hour might bring.
 To-day I am the North wind on the wing,
 And the wide roaring of the clamorous sea,
 And the huge heaven's calm immensity,
 And all the bloom and music of the Spring.

I lived and loved. Now, is it life or death
 Here in this new vast world wherein I move ?
 How, when the winds of heaven are my breath,
 And the great sun the eye whereby I see ?
 I live not in myself ; only in Thee.
 Last night I loved. This morning I am Love.

(III)

The immortal stream that throbs in every vein
 Of this My mortal frame of men and things :
 The tide that surges in the hearts of Kings
 And swells the teaming bosom of the main ;
 The Spring that blossoms in the dusty plain —
 Aye and the soul of many thousand Springs ;
 Take it to make thy heart's imaginings ;
 Take it to make the workings of thy brain.

Dost thou not feel the Force within thee move,
 And tremble with the trembling of the skies ?
 This fire which burns within thee, 'tis My love ;
 My truth it is which lightens in thine eyes.
 Thou art in Me, O friend ; and I in thee,
 The light thou seest, and the eyes that see.

(IV)

Who sings of love ? One moment let me lend
 One broken fragment of my boundless store ;
 One moment, let him stand beside the shore
 Of Thee, my Ocean, and his songs will end
 In shame and silence. O my Friend, my Friend,
 Shall I keep craven silence or be bold,
 And Truth, Thy Truth, O Lord of Truth, be told ?
 Of how the Highest High can condescend,

And how the lowest low can rise and soar
 Even to Thy Presence, even to Thy Heart,
 O mightiest of the mighty (yet more dear
 Than mighty), ever nearer and more near,
 Until he is, and shall be evermore,
 O mightiest of the mighty, what Thou art.

(V)

Nay, marvel not, good friends, to hear my tale :
 Call it the vision of a restless night ;
 You see me—what I am, a simple wight
 Not greatly learned, old, and poor, and frail.
 Then wherefore should you tremble and turn pale ?
 I am no wearer of a kingly crown,
 No sovereign lord to slay you with a frown,
 No sceptred conqueror in bloody mail.

And yet in truth, last night, I was a king :
 Last night I sat upon a royal seat
 With all the hosts of heaven at my feet.
 Nay, good my masters, cease your murmuring.
 Or slay me if you will. For, were I slain,
 This very night I shall be king again.

(VI)

O poor, condemned, divine, and tortured thing !
 Who is it gave the cup and bade thee drink ?
 Who is it gave the thought and bade thee think ?
 Have I not seen the heaven of heavens descend ?
 Have I not heard the whirlwind thundering ?
 Have I not felt the Shape draw near, and bend
 Towards me ? It is He, the Lord, the King,
 The Master—aye the Master and the Friend.

Slayer, I hail thee with my dying breath,
 Victor, I yield the fortress of my heart.
 The doors fly open, and the poor lips part
 Once more, and then no more, world without end.
 The cup is poison, and the thought is death ;
 And He that gives them, is He not the Friend ?

III.

Prayer is the act of attention directed upon God. The progressive differentiation of the presentation-continuum may reveal to the subject Divine Signatures in everything : if so, prayer may be of a pantheistic character, the acts of attention directed upon a universe increasingly apprehended as Divine and union therewith of a highly aesthetic nature will develop. Or the progressive differentiation of the presentation-continuum

may assume for the subject an increasingly unsatisfying and unsatisfactory character so that the subject, withdrawing its attention from objects presented, concentrates more and more upon a presented transcendent object, God: if so, God in His numinous character, in the category of the Holy, the Awful, the Overpowering, will be increasingly apprehended, probably in a penitential way, and union therewith will tend to be austere, the way the *via negativa*. The æsthetic side of the contemplative communion with God which is prayer in its highest form will not in this last case be altogether absent; attention will be lit up throughout by the lamp Beauty, but always through "the lamp Beauty" will be discerned "the light God."* Precisely because prayer is attention directed upon God, or, upon any other object of religious aspiration, belief, worship, awe, it is necessarily petitionary in character though not wholly so nor for ever so. It is customary nowadays to decry petitionary prayer. My contention is that all experience that falls in any degree short of perfection, short of the Absolute, short of consummated and infinite bliss is *ipso facto* petitionary. Any one finite experience is for the individual like a first helping or a first course at dinner, not enough. We are always hungry though not always for the same food cooked in the same way. Attention just because it is attention, "the light used by conation to mark out its path," represents a hunger, a psychic hunger, a spiritual hunger: and when it is satisfied in one direction it turns unsatisfied in another direction. We are made so, made restless so that we may, as George Herbert expresses it in "The Pulley," find rest only in God. Prayer, therefore, because it is essentially a state of attention is essentially petitionary. This does not in any way exclude states of attention in which contemplation and gratitude (*not* the sense of favours to come) are so marked as to reduce the petitionary to a minimum. Nevertheless prayer is petitionary because it is attention and it

* Cp. Francis Thompson's *Essay on Shelley*.

is worship* because it is attention focussed upon a numinous object or objects realized and felt to be Other than the individual. When we once realize that prayer is attention thus focussed, certain theoretical difficulties are, if not solved, at any rate greatly diminished. To argue that prayer is unnecessary in view of the omniscience and omnipotent love of God is irrelevant. The act of attention which we call prayer will, like any act of attention which is concentrated and seconded by appropriate measures (as books for our studies, gear for our sports), result in a finer and finer perception of the Divine nature, a fuller reliance upon its universal comprehension, and a more single and less selfish devotion to service. To think that prayer, and particularly intercessory prayer, is derogatory to the power and dignity of God is also irrelevant. Because prayer is the process of attention focussed upon God as its object, it necessarily involves reciprocity between subject and object, an apperceptive process, a process of assimilation, subject draws near to object, object draws near to subject, "there is no more near nor far," and in that increasingly intimate relation others whom one loves are involved, affected, enriched. They too are warmed from Love's great fire. And to be afraid of prayer, or to think it worthless or useless because of the insignificance of the individual is truly to confound material magnitude with spiritual significance. The hairs of our head are of little magnitude materially, yet, we are told, they are all numbered.

"All's vast that vastness means :
 Nature is whole in her least things exprest ;
 Our towns are copied fragments from our breast,
 And all man's grandeurs strive but to impart
 The grandeurs of his Babylonian heart." †

Because, moreover, experience is the process of becoming expert by experiment, and because prayer is attention directed

* Cp. Mr. Edwyn Bevan in *Concerning Prayer*, p. 194.

† Francis Thompson.

upon a given object, it follows that prayer is experimental, perfected, if we choose, because however we may ultimately come to think of the problem of free will (and that it is a problem is a case of selective consideration on our part) the supposition of any continued experience is that attention once gained externally or internally by or for the object is continued at our choice and carried over into acts expressive. We need not choose to be interested in that form of attention which is prayer; we may deliberately divert attention from the object upon which or whom prayer normally concentrates. If so, we pay the same price as for any other lack of interest, lack of attention, namely, ignorance and leanness in our souls. But although we need not be interested in the object of prayer, for Christian philosophy, at any rate, that Object, that Person is interested in us; indeed, pursues us unwearyingly down the nights and down the days. The eye, being open, cannot choose but see a world: how much it sees, and of what sort, we partly may determine. The soul, being open, cannot choose but see God, perceive a transcendent Other. How much of that Other the soul sees, how fully it realizes the Divine attributes, name and nature the soul herself may partly determine. Sight is experimental and progressive in the one case; insight, prayer, is as experimental, progressive, in the other. In both cases there is partial liberty of action, in both cases some constraint or grace from without is exercised. In sense-perception, aided by the understanding we progressively differentiate the sense-presentation-continuum: that continuum is from the first given, not made, and though increasingly apprehended, with increasing richness of enjoyment, it is in the nature of things never completely differentiated and resynthesized into a higher unit by any one finite individual, nor even by a corporate jointly working group. In like manner, prayer is the progressive differentiation of a spiritual presentation-continuum (the relationship of which to the sense-continuum is not our present purpose), and that continuum also is from the first given, not made, is

increasingly differentiated, enjoyed with increasing richness, yet never completely re-unified either by the finite individual or by a group.

Not where the wheeling systems darken,
 And our benumbed conceiving soars,
 The drift of pinions, would we hearken,
 Beats at our own clay-shuttered doors.
 The angels keep their ancient places,
 Turn but a stone and start a wing,
 'Tis ye, 'tis your estranged faces
 That miss the many-splendoured thing.
 But (when so sad thou canst not sadder)
 Cry, and upon thy so sore loss
 Shall shine the traffic of Jacob's ladder,
 Pitched betwixt Heaven and Charing Cross.

The psychology of prayer, therefore, is the psychology of attention. It is dependent upon interest and is transient or permanent according to the strength of the interest. It is rhythmical, ranging from the huge heavens' calm immensity to the wide roaring of the clamorous sea. It is simple attraction, developed and articulated attention with a positive intention resulting in a positive construction for the way of living and the way of thinking which characterize any religion, or it is, after "large draughts of intellectual day" and "thirsts of love more large than they," absorption, and it alternates for any individual between these three levels. It may express itself vocally or otherwise—in intense moments of attention there is silence because there is tension: so with prayer, for some persons—

" Words are but under-agents in their souls
 When they are grasping with their greatest strength
 They do not breathe among them."*

In such tension there is inhibition of aught that impedes the assimilating act: the ligature described by the saints is, from the psychological point of view, similar to the ligature of the faculties in any degree of æsthetic contemplation: the heightening of sensibility in one direction is accompanied by a lowering of sensibility in other directions and by what Wordsworth calls a "laying asleep." The faculties, says Poulain, are rivetted upon

* Wordsworth: *The Prelude*.

a higher object. There is arrest of attention but attention is not therefore at rest. Together with this high level of attention goes a high degree of emotion, diffused or concentrated, and it is the tension of feeling which finally compels the subject to some expressive act of liberation, ejaculatory, ecstatic, or more austere constructive. There is a general expansion of intelligence during such states of high attention and of high concomitant emotion, but poet and saint concur in finding the language of everyday life unexpressive for the inexpressible,* unless indeed they raise prose to poetry. Thus we find in Wordsworth a mystic to whom "the earth and common face of Nature spake rememberable things," one to whom the Divine immanence rather than the Divine transcendence is ever acutely realized and felt so that from the simple spectacle of a moon "hung naked in a firmament of azure without cloud" he passes rapidly through successive levels of contemplative prayer to the "highest bliss that flesh can know," the final consummated stage of the mystic union. The memorable passage in Book XIV of the *Prelude* in which this is recorded appears to exhibit all three of the elements described by Father Poulain, viz., an almost permanent union persisting even in the midst of exterior occupation: a transformation of the higher faculties and an intellectual vision "habitually infused through every image and through every thought." It is pre-eminently a sustained act of attention and it is expressly directed upon the Divine apprehended through Nature and through intellectual symbolism:

The Moon hung naked in a firmament
Of azure without cloud, and at my feet
Rested a silent sea of hoary mist
. . . . It appeared to me the type
Of a majestic intellect, its acts
And its possessions, what it has and craves,
What in itself it is, and would become.
There I beheld the emblem of a mind
That feeds upon infinity, that broods
Over the dark abyss, intent to hear

* See Sir Ronald Ross: *Philosophies*, especially the poem written after his discovery of the cause of malaria. I have developed this more fully in a previous essay, *Church Quarterly Review*, 1922.

Its voices issuing forth to silent light
 In one continuous stream : a mind sustained
 By recognitions of transcendent power,
 In sense conducting to ideal form,
 In soul of more than mortal privilege.
 One function, above all, of such a mind
 Had Nature shadowed there, by putting forth,
 'Mid circumstances awful and sublime,
 To exert upon the face of outward things,
 So moulded, joined, abstracted, so endowed
 With interchangeable supremacy,
 That men, least sensitive, see, hear, perceive,
 And cannot choose but feel. The power, which all
 Acknowledge when thus moved, which Nature thus
 To bodily sense exhibits, is the express
 Resemblance of that glorious faculty
 That higher minds bear with them as their own.
 This is the very spirit in which they deal
 With the whole compass of the universe :
 They from their native selves can send abroad
 Kindred mutations : for themselves create
 A like existence : and, whene'er it dawns
 Created for them, catch it, or are caught
 By its inevitable mastery,
 Like angels stopped upon the wing by sound
 Of harmony from Heaven's remotest spheres.
 Then the enduring and the transient both
 Serve to exalt : they build up greatest things
 From least suggestions ; ever on the watch,
 They need not extraordinary calls
 To rouse them ; in a world of life they live,
 By sensible impressions not enthralled,
 But by their quickening impulse made more prompt
 To hold fit converse with the spiritual world,
 And with the generations of mankind
 Spread over time, past, present, and to come,
 Ago after age, till Time shall be no more.
 Such minds are truly from the Deity,
 For they are Powers ; and hence the highest bliss
 That flesh can know is theirs : the consciousness
 Of Whom they are, habitually infused
 Through every image and through every thought,
 And all affections by communion raised
 From earth to heaven, from human to divine :
 Hence endless occupation for the Soul,
 Whether discursive or intuitive :
 Hence cheerfulness for acts of daily life,
 Emotions which best foresight need not fear,
 Most worthy then of trust when most intense.
 Hence, amid ills that vex and wrongs that crush
 Our hearts—that peace
 Which passeth understanding, that repose
 In moral judgments which from this pure source
 Must come, or will by man be sought in vain.

C.

I have tried to show, then, that prayer, amid all its many diversities of form and content is psychologically to be interpreted as the act of attention directed upon God. So regarded, a general though not necessarily specific petitionary character is the mark of prayer as it is the mark of all purposive striving of attention. So conceived, difficulties of form, of time and place become quite subordinate; prayer, being an act of attention, assumes any form appropriate to its specific purpose and to its individual user and frame of reference. Associated thus directly with attention, viewed as of the very form of experience in general, it naturally includes praise, intercession, communion. Indeed, since experience is essentially social, the mind having at any rate itself for audience, prayer is assumed to be objective in reference and just as the mere fact of presentation is a sufficient validity for the experience thereof (though not necessarily for our inferences therefrom) prayer is its own validity. Any subject quâ subject is subject to, petitioner in the court of its object or objects. In prayer that object is, for Westerners, conceived as personal, and inter-subjective intercourse being a fact, prayer is better conceived as communion between persons than more abstractly as the contemplation of an impersonal object by a personal subject. For, perhaps, personal subjects can never really know aught but personal objects. In æsthetic experience, and particularly in art construction, there is a prayer-factor, culminating in absorption which more fully than in any other field shows us that all life is a beggar's opera. But how will prayer succeed in the court of metaphysics? It is here more particularly that I seek aid within this Society.

III.

Philosophers in their metaphysical speculations closely scrutinize fundamental concepts in everyday use, as time, space, cause, effect, substance, attribute. I ask myself why it is that prayer does not equally attract their scrutiny? Is not the

practice world-wide, is it not abiding, century after century, is it not a fundamental notion however crudely expressed and practised in any religion? Why should it be left to the sociologist to observe in its rawer manifestations and for the psychologist to describe from his own or recorded experience? If the ultimate nature of experience be examined, will not prayer emerge as integral to the subject-object relation?

1. Suppose we say with Kant that Space is the form of external perception and Time the form of internal perception. May we not proceed to add that Prayer is the form of spiritual perception, of any perception involving a transcendental order of knowledge? Or, if we say with Kant that the categories of the Understanding are *a priori* constituents that function in the organization of sense-data into coherent knowledge, may we not say that prayer is a category which functions in the organization of spiritual data into coherent spirituality? Or, if we employ Kant's language about the transcendental unity of apperception may we not find it in prayer? Kant found in the æsthetic judgment and in æsthetic experience the reconciler and link between the first two Critiques. The æsthetic judgment, functioning *as if* there were in the universe a "general purposiveness without a purpose," was found capable of bridging the gulf between the phenomenal and noumenal orders. To the man of prayer there is no such gulf. Living a prayer life, he works *as if* the transcendental Person were ever by his side, "as ever in my great Taskmaster's eye," in Milton's words. Has prayer no metaphysical standing thus?

2. Or suppose we plead the cause of prayer before Dr. Carr, the exponent of our current theory of monads. For him, the human being in his two-fold nature (of mind and body) is the monad, and although he regards the subject-object relation as wider and more fundamental than the mind-body relation, may we not add to his doctrine of the solidarity of mind and body a solidarity of which prayer is the witness and prayer the proximate

cause, solidarity of mind-body with spirit, perhaps with Deity and Deity's body, the Universe? Dr. Carr regards mind and body as essentially different though existentially identical, and "it is impossible to give meaning to any character of the one in abstraction from the relation in which it stands to the other."* Prayer it is which gives meaning to what would otherwise be an abstract and purely theoretical relation between God and the spirits, between God and His creatures. "The subjectivity (? better, privacy) which characterizes mind" does not pertain to it in the special relationship of prayer. In that relationship there is no privacy as between the subject praying and the Father listening, nor does man object to this.† But for Dr. Carr the monadic principle must be self-consistent excluding any appeal to a transcendent cause. Suppose, however, that there be a cause which, while subsequently recognized as transcendent, is immediately and first apprehended as immanent? Is that inconsistent with the monadic principle? Suppose, indeed, that it is of the nature of monadic life that it should be not solitary but social within its own nature? Suppose that "the very concept of reason implies discourse,"‡ does it not follow that far from the individual mind having possibly no audience but itself, it necessarily, in the very fact of communication and expression, always has audience and that the subject-object relationship is at bottom a relationship between a finite individual and an infinite Person manifested and manifesting in the presentation-continuum? "The ultimate reality," Dr. Carr writes, "can only be conceived as opposition." Opposition to what? Of contradictions or of contraries or of substantival and adjectival realities? The full activity of the human being as a monad

* Dr. Carr's and Dr. Alexander's positions both seem to me to be logically compatible with the Incarnation.

† Cp. C. C. J. Webb on this point in his *Problems in the relation of God and Man*.

‡ Carr, *op. cit.* 98.

which Dr. Carr offers as the correction of philosophy must for every monad include that reference (a prayer-reference) to a Person both immanent and transcendental in nature. The human individual will always side with the poet rather than with the philosopher and say

"Our home, our being's heart and home
Is with infinitude and only there."

3. But perhaps Dr. Carr's use of the phrase "sympathetic emotion" as the means of communication may not unlawfully be read as covering such non-rational factors in religious experience as are dealt with by Otto in his *Das Heilige*.^{*} In the notion of goodness, of increasing goodness, of absolute goodness, there is a factor which can never be exhaustively analysed out by reason; an "extra." Otto calls it the numinous. The numinous includes creature-feeling as a subjective concomitant of religious experience, but it is not merely creative feeling: it is attached to, reaches towards a "*numen præsens*," felt as objective and outside the self. For this Other, this ultimate object of the abiding relationship in experience, Otto uses the phrase *mysterium-tremendum* and he delineates the Numen as possessing qualities of awfulness, overpoweringness, energy or urgency and as wholly other. It is uniquely fascinating, and in the measure of our spiritual progress is increasingly recognized as Person. Otto remarks that the cognition of the Holy is *a priori* but not innate, that is, is not everyone's actual possession but is everyone's potential possession, and is awakened in various fashions. "There is a faculty of receptivity and a principle of acknowledgment, not a capacity to produce the cognitions in question for oneself independently. This latter capacity is confined to those specially 'endowed'." (Otto, *op. cit.* p. 181.) Here Otto and Poulain are at one: the graces of interior prayer may include such endowment, and in that supreme level of prayer-experience there is revelation of the

^{*} Eng. trs. *The Idea of the Holy*: Oxford Press, 1923.

true nature of the numen : " Such a one is more than Prophet. He is the Son."

Otto's remarkable work has come into my hands very opportunely, giving me what I had hardly dared to hope for ; an express affirmation by a highly competent authority, of the necessary validity of prayer : " Man's nature," says T. H. Green somewhere, " is in process of being communicated to him."* Is it too much to suggest that if this be so, prayer is the vehicle of communication and is not merely of the fundamental essence of religion as Heiler† shows, but is essential in all experience and inter-subjective intercourse and this fact alone makes intelligible the precept " Pray without ceasing."

4. Personal experience without a personal subject is unintelligible : unless it be in relation with other persons ; persons, not things ? We cannot logically identify I and Me in experience, yet the pure Ego is implicated and immanent in all experience, necessary to all experience and transcendent thereof as well as immanent therein. The Divine experience is in some fashion a reciprocity of subject-object in inseparable communion of personality. It is no adjectival disgrace, no weakening of our individuality to say, following Lotze, that since perfect personality is in God alone there is *ultimately* only one pure Self ; we are objects of His experience, subjects in our own. " Ultimately, the subject of all experience is God, but He who is thus the logical *prius* of experience is in a sense last in order of our growing apprehension." Every stage of our experience is some progressive or retrogressive stage in the differentiation of a presented object—the World, History, God. One long series of quests and conquests (together with defeats) marks our experience. Every question, every prayer, rightly asked, by the right person, will lead to the right answer. Prayer ceases only when experience ceases, is futile only when experience is stagnant, is meaningless

* I have not been able to trace this at the time of going to press.

† Das Gebet.

only when experience signifies nothing. It is unanswered only when there is nothing to answer.

In a recent article on the mystical element in Bishop Butler* Dr. Caldecott has shown that even in so eminently reasonable an intellect as Butler's, occasions arise when resort must be made to grounds that are beyond "our reason's speech or sway." The objectivity at the heart of some values (the phrase is Dr. Caldecott's) is grounded in something more than reason, something more than probability reasoning. It arises from some interior illumination which enables such a man as Butler to transcend the dualism into which he is forced by mere intellect and to find a higher unity in theistic faith, "shedding light" says Dr. Caldecott, "from the *au-delà intérieur* . . . from the action in Butler's mind of a higher Rationalism which does offer necessary and universal truth . . . which justifies inference from part to pass, and even from part to whole, from particulars to a 'larger and more general government of the world' "

The metaphysic of prayer, therefore, is the metaphysic of experience : admit a transcendental factor in the one and validity of the other follows. Yet, quite apart from a metaphysic, for those who pray prayer is its own validity, and if our account of it as a form of attention be sound, those who pray have sufficient psychological warrant without resort to less attractive doctrines of auto-suggestion. Rightly to delineate and name the ineffable Name of the ultimate Object of our experience may prove to be a ceaseless and wearying quest, but there is sufficient likeness between prayer and æsthetic construction to justify our listening to the poet if the philosopher fails us : for at any rate if philosophy cannot solve our problems, poetry will dissolve them in the light of revelations vouchsafed to Beauty alone :

O World invisible, we view thee,
O World unknowable, we know thee,
O World intangible we touch thee,
Inapprehensible, we clutch thee !

* *The Quest*, April, 1924.

Does the fish soar to find the ocean ?
The eagle plunge to find the air ?
That we ask of the stars in motion
If they have rumour of thee there ?

Not where the wheeling systems darken
And our benumbed conceiving soars,
The drift of pinions, would we hearken,
Beats at our own clay-shuttered doors.

The angels keep their ancient places,
Turn but a stone and start a wing,
'Tis ye, 'tis your estranged faces,
That miss the many-splendoured thing.

But (when so sad thou canst not sadder)
Cry, and upon thy so sore loss
Shall shine the traffic of Jacob's ladder,
Pitched betwixt Heaven and Charing Cross.

Yea, in the Night, my Soul, my Daughter,
Cry, clinging Heaven by the hem,
And lo ! Christ walking on the water
Not of Gennesareth, but Thames !



*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C. 1, on May 19th, 1924, at 8 p.m.*

XII.—MAKE-BELIEVE.

By E. T. CAMPAGNAC.

WHAT is make-believe? We may get some help in considering, though it would be rash to say in answering this question, if we take two or three other words and set out what seem to be their meanings as we commonly use them. What, then, are the meanings of the words belief, knowledge, disbelief, upon the lips not perhaps of philosophers, but of plain men.

(a) "I believe" may mean "(i) I think so; I think I could get proof or evidence, but at the moment I have not gathered it—I am almost sure. I believe it is 3.30, and I could find out for certain by going to the end of this street and looking at the clock." But "I believe" may mean (ii) that I have a conviction which is above the level* of proofs, however high they may be piled up. I believe in the goodness of a man—the good things he has done are illustrations of his goodness, but for me are not needed as proofs of it. It is not composed of his good deeds, nor equal to the total of them. It transcends them. Here belief goes beyond evidence (without conflicting with it) and is of a different quality from knowledge.

* Max Beerbohm, *Yet Again*. "On Shakespeare's Birthday."

"To be convinced of a thing without being able to establish it is the surest recipe for making oneself ridiculous. The Baconians have thus made themselves very ridiculous, and that alone is reason enough for not wishing to join them. And yet my heart is with them, and my voice urges them to carry on the fight. It is a good fight, in my opinion, and I hope they will win it" (pp. 211-212).

(b) I know, when I have evidence satisfactory to me, which I do not doubt would also be satisfactory to any other intelligent* person to whom it was presented.

(c) Disbelief is our attitude towards something which we are (i) disinclined to believe though we have not actual evidence against it, being persuaded that such destructive evidence could be collected or (ii) unwilling practically to accept or adopt, so as to act upon it; though evidence in its support may be before our eyes we yet refuse to see it, or (iii) unable to believe because we are in possession of evidence which clearly contradicts it.

It is here that we may most easily begin to look at make-believe. It may be described in Coleridge's words as a willing suspension of disbelief. We disbelieve, but we make up our minds for a purpose and on an occasion to pretend that we believe, or more strongly, we make ourselves believe, either without or against evidence, or more violently still, we act as if we knew that to be which we know not to be. These are three accounts which we might give of the matter, and I think, often with truth; but there is a simpler account. We allow the charm and attraction of the thing which we want to believe to dull, as with a pleasant opiate, our sense of its incongruity with the world in which we ordinarily move; or, as if by a relaxation of the sinews ordinarily strung for the effort of criticism, we relapse into an easy acceptance of a delightful thing. This suspension of disbelief is often said to be a characteristic achievement of children; it is easy, so we are told, for them to suspend disbelief, because

* W. E. Johnson. *Logic*, Part I, p. 6.

" . . . hypothesis, postulate, axiom. Each of these terms indicates the peculiar attitude to be assumed towards the proposition in question by any thinker: thus a hypothesis stands for a proposition which awaits further scientific investigation before being finally accepted or rejected, a postulate stands for a proposition which cannot be brought to the test of experience, but the truth of which is demanded by the thinker, and an axiom is a proposition the truth of which is self-evident to the thinker."

Cf. also ibid. Part II, pp. 244-5.

of the scantiness of the evidence which they could possess either for or against a theory. But this is a condition not for making disbelief easy, but for making it unnecessary. The practice of make-believe is not confined to children. Quite otherwise, it is a prerogative of maturity. And again it is not a negative thing—for we may continue in Coleridge's words and call it "that willing suspension of disbelief, for the moment, which constitutes poetic faith."*

A poetic faith is a faith which creates its own objects; or if that is going too far by being too literal, it is a faith which creates and for a time maintains the conditions in which its objects can live and have their being.

For now we have to ask what it is about which we suspend disbelief. It is not necessarily, I think, the object of our poetic faith; that may be enshrined, safe from violence and outrage in our hearts; but since we like to indulge ourselves or our neighbours with a spectacle, we build for an immaterial thing a material shrine, and suspend our belief in the incongruity of the shrine both with the thing for which we have built it and with the world in which we have set it. Let us suppose that a man believes in immortality, whatever that may mean for him. He may in a splendid figure speak of this mortal "putting on immortality," but even that figure he uses because at the very moment when he is trying to array the corruptible in the dress of incorruption, he is also attempting to make immortality wear a dress in which it can show itself in a world familiar with death, but ignorant of deathlessness. He suspends his disbelief in the sheer absurdity of the image. He does not suspend his disbelief in immortality, because he has no disbelief in that. He may be constrained further to suspend his disbelief in the inadequacy of his image, however magnificent, for the thing which he believes, but his belief he cherishes none the less. That belief is consistent

* Coleridge, *Bior. Lit.* ch. XIV, vol. II, p. 107, Shawcross.

and the object of that belief harmonious in the world to which they belong, and he is entitled to reply to critics who find both inconsistent and inharmonious with the world to which they belong, that their beliefs and the things in which they believe cannot be adjusted and reconciled to the world which he claims as his own. He is entitled to make that reply, but he must expect and endure a rejoinder. For his critics may with great force and point tell him that if he will be content to live in his world they for their part are at any rate not ill-content to live in theirs. Let him live in the region in which he is at home. And they are likely to pierce his armour if they thus address him. For the truth is that he is not *quite* at home in the region of his preference ; he has some strong attachments to their region ; and, more than that, he discovers that he cannot be at home there unless his critics will come and live there with him. Their company he seeks, though their comments he deplores, and all the more bitterly because he sometimes surprises himself in making them too. In self defence he offers a compromise, and thus he addresses himself and them. " We are apt, perhaps bound," he says, " to distinguish between fact and fiction, between the proved prosaic and the imaginary beloved. But we shall not say that the fictitious is necessarily false. It may be true, in its own setting, on its own stage, the scenery and properties of which must be congruous with it. We shrink from delusion, I grant ; but come with me and share the pleasure of illusion. Grant, if but for a moment, my premises ; enter, though you may not stay long in the region to which I invite you, and have no fear if I ask you to suspend your disbelief, to suspend your judgment ; for I ask you to do that only in regard to my premises ; having granted those, you will find that the images which I offer to you sustain themselves easily and naturally. You will find that you can believe in them in their proper place. I do not ask you to say that they sustain themselves in any other place ; but you will see that it would be irrelevant to say that they do not sustain

themselves in any other place, for it is of this place, the place founded upon my premises, and of no other that we are talking." It is in this sense that Coleridge* speaks of illusion, "that negative, faith, which simply permits the images presented (in a drama) to work by their own force, without either denial or affirmation of their real existence by the judgment."

But a compromise is a hateful thing; it is better to hold fast two beliefs, inconsistent in appearance, but consistent in virtue of the fact that we actually hold them even if they threaten to send us asunder, than to sacrifice both in concession to a formal common-sense. We go to the theatre, and live in the play, the characters of which are real to us; but we come out of the theatre again, not unwillingly and go home. Do we pass from the realm of illusion to that of reality? We can only be content to say this and to think this, if we are content to cleave our lives into separate parts, work and play, the serious and the amusing, the real and the ideal. But though we are often, we are not always, content with such a division. We can only be at home in the theatre, if we are play actors, stage managers and producers, poets even and dramatists at home, taking for ourselves and seeing upon our people characters and parts which we should not see, if we did not "make-believe."

For let us admit that, judged merely by what they say and do, our friends and kindred could not keep the characters which we assign them for their goodness, their charm, their intelligence, nor our foes for the characters which we not less firmly impose on them for their badness, their ungraciousness, their stupidity. Heroes and villains, saints and sinners, the genius and the dotard we insist on having these bright contrasts; but a critic will tone down our high colours, if we let him, and tell us that our friends have their faults and our foes their (recondite) virtues. He

* *Biog. Lit.* Ch. XX, Ed. Shawcross, vol. II, p. 107.

speaks the truth—but not the sort of truth that matters. We want truth which presents and sustains an ideal. If we tell him so, that cold and solemn man will have his rejoinder. He says it is an idol that we want.

Let us not be too quick to rebut his charge. Idolatry is as wide as humanity, and as old. Men want a form, a figure, a semblance, but of what? It must be a composite thing, in part made up of what they know, sharing their knowledge with the most sceptical of their fellows: in part made up of what they fear, or hate or love, passionately and with conviction, even though some of their fellows, or most of them, are unable to share their emotions. The ideal may be something tangible, visible, or it may have no form for eye or hand, an image of the mind. It is a likeness which yet is different from the actual. What are the conditions on which we can accept it? There are conditions—and here once more I turn to Coleridge. "The ideal," he says, "consists in the happy balance of the generic with the individual."* These are the conditions—vividness without narrowness; universality without vagueness. Idolatry, at first a simple and necessary form of representation, passes into subtle and the subtlest modes of art and of many arts. It passes into them and through them and beyond them, not disdaining or discarding them, but seeking more than they can give in its own growth. The idol becomes the ideal, and is enshrined no longer in a house made with hands, but in the temple of the imagination. Even here it suffers change, but at any moment it stands for man's effort, sufficiently successful for that moment, to hold the seen and the unseen, the temporal and the eternal in his grasp while he proves his title to immortality in the repeated act of dying. The ideal is a contradiction in terms by which he professes and in which he realises his faith. Let us allow that a man who holds such an ideal is in a condition of passionate

* *Op. cit.*, Vol. II, p. 187.

warfare waged within and against himself. He makes himself believe. It is a condition which he will make painful efforts to attain. He constrains himself to construct the world in which he desires to dwell. He urges his neighbours to do the same. If it is said that here is fanaticism, the source and seed of persecution and violent outrage upon freedom—his own or that of others—it is hard to deny it. Yet fanaticism cures itself—after inflicting many injuries, no doubt, and suffering calamity. It cures, because it ends, itself. It does not keep the happy balance between the generic and the individual. It is idolatry static and petrified. True make-believe is ever making, ever creative ; it is idolatry dynamic and growing. The idols of fanaticism either wear out, if they are as fixed as it is, or, if they grow and move, they outgrow it and leave it behind. Indeed, one might say that fanaticism pays homage either to an object which has already lost its life, or to the shell of an ideal which has released itself from imprisonment. Yet the object of the idealist's worship is, in part at least, his own creation, though he cannot pay his devotion unless he believes that the object has life of its own.

But let us use other words in order to approach our subject by another road. The man who makes believe, who holds what I have called (provisionally and with reluctance) an ideal, adopts an hypothesis. And this he does in one or other of two fashions. Either he encounters a new fact, has suffered a new experience which he cannot gainsay or put from him, but which has no place in the system or universe in which he has lived ; this thing has happened to him, but it appears not to belong to his world, that order of things to which he has been accustomed. He must, then, make up a world which will take this new fact and with it the contents of his former world. Now the contents of that former world neither accord well with the new world nor adequately fill it. And until the new world is fitted forth completely and appropriately it lacks reality because it lacks useful-

ness. No man can live in an unfurnished house. So a man might come into possession of a very precious jewel, but he cannot fitly wear it in the simple cottage in which he has lived—it is fit for a palace. He must make *do*, however, for the present, with what he has and he makes *up* with what he invents. His hypothesis is of a perfectly equipped palace, and meanwhile he calls his cottage a palace, and asks his friends to enter into its walls, which will prove ample if they also enter into his conceit. Or else he may stumble upon a universe, subtler and larger than that to which he had been accustomed, a scheme of things, a castle in Spain, but to enter it and use it as a master, confessed and not only self-acclaimed, he must wear a jewel, which in fact he does not possess. He makes a hypothesis of that jewel, rejoices in its splendour and begs his friends to recognize its brilliance. Mill* tells us that “it appears to be a condition of the most genuinely scientific hypothesis, that it be not destined always to remain an hypothesis, but be of such a nature as to be either proved or disproved by comparison with observed facts.” Mr. Joseph† who cites this passage adds a proviso: “It should be of such a nature that observable facts, if we could find them, might prove or disprove it, *i.e.*, it should not appeal to the agency of causes . . . of whose presence we can have no independent evidence, and whose nature we are not able so to ascertain as to determine deductively how they must act if they are present, for with the agency of such causes as these any facts are equally compatible; and thus they furnish no explanation why the facts are so and not otherwise.”

Mr. Joseph’s proviso, “if we could find them,” so far from narrowing, in fact widens Mill’s condition. But may we not widen the condition still more? Is it not possible to claim that the formation and the vigorous, the impassioned, acceptance of a

* Mill, *System of Logic*, III, XIV, p. 4.

† Joseph, *An Introduction to Logic*, p. 465.

hypothesis, brings into existence new facts of a new order, which cannot be challenged by comparison with facts belonging solely to another and earlier order? It may be urged in reply to this that these new facts of a new order do not cancel facts earlier accepted or disprove them, but rather set them in a new light and give them a fresh significance. But there is an important difference between taming new facts, reducing them to familiarity, setting them in an old order—there is a difference between that and such an illumination of old facts as will make them new, lifting them clean out of their earlier order and placing them in a new setting. It is not consonance with facts that gives value to an hypothesis; but consonance with the universe of facts or, shall we say, with the unity of experience, in which the holder of the hypothesis claims his life. And since it may well be that an hypothesis opens a new world to a man in which he is more at home than in the old, if he cannot reconcile the old world with the new, and has to make a choice, he will prefer the new. He may hope some day to reconcile them, but until that day comes, he will not indeed reject the old world (that is too harsh a word); but he will let it go or let it be. In fact the old world has become the hypothetical world; which must justify itself, either by becoming or by coming to be seen to be in harmony with the new.

An hypothesis, as Mr. Joseph grants in a later passage, may be framed and used, not because it is regarded as true, "but only as facilitating enquiry." This would be a "methodological assumption." A man has been trying to explain the occurrence of certain facts, and has not been able to do it. He may "assume what is necessary to the possibility of doing it, even though he may believe that it cannot be altogether done." To be sure he may, but it is a colourless and cold-blooded proceeding. Make-believe, as I am here considering it, is something red and hot and arrogant. It is not content with explaining occurrences, it

is creative, and desires to produce results. These results, a man has been told or for himself has guessed, spring from a certain cause. He will see certain things if he can take his stand upon a hill. But the hill does not exist as other hills exist, and if he is to stand on its height, he must first build it for himself. He may, to be sure, have some encouragement in trying to do this. He may have been informed by other men, who have built hills for themselves, that they see from the vantage ground of their hypothesis what on no account and at no price would they have missed seeing; and he is satisfied that their hypothesis has made a difference to them, has had evident results in their character and conduct, in their mode of life and their zest in living, and these results he desires for himself. He may be encouraged by this observation, to build his own hill, for their hills he cannot climb. Or he may be driven upon that enterprise by impulses which spring or seem to spring within himself only. He builds his hill then, a hill wholly imaginary, a thing that contradicts experience and outrages common-sense, and standing, ridiculous and magnificent upon it, he sees what he has not seen before, a vision which he will not forgo; and even if he is unable to remain upon that height, or if the ground of his daring fiction crumbles beneath him, he is henceforth a different man from what he was before. Will he abandon his belief in the reality, the truth, of what he has seen because he cannot harmonize it with the real things which he can vouch for in the market place and verify by any commonly accepted proofs?*

I have said that the hill upon which the make-believer stands may crumble under him; but if it crumbles, it disintegrates itself only to become integral with the vision which he won and still keeps; and if the hill remains firm, even so—despite common sense and physical propriety—it becomes part of the scene which the man enjoys when he has built and occupied it. The

*Cf. Joachim, *The Nature of Truth*, p. 166 n.

vantage ground *from* which he looks is part at least of the scene to which he directs his gaze. The inward eye creates, sustains and *is* the thing it sees.

I have much hesitation in referring to the writing of contemporary philosophers. They write, I imagine, for fit readers, for philosophers like themselves, or if not like themselves, at any rate for philosophers. But other people may read the philosopher's pages and find delight (perhaps not legitimate) in what they think they understand, or can, without wholly understanding, turn to their own purposes; they may find some satisfaction too in noting that what one philosopher seems to say another seems to gainsay. The Dean of St. Paul's, illuminating, as I believe, an essential, but difficult doctrine of Plotinus,* quotes Professor Taylor who himself sheds light on every subject he touches. Professor Taylor, interpreted by the Dean, grants that "Neptune existed long before there were any human astronomers, and if there were no astronomers on other planets within sight of Neptune, it existed none the less, though observed by no finite intelligence." "And though," so he proceeds," it may be reasonable to believe in an omniscient God who did know about the perturbations (of Uranus) and their cause before we suspected either, it is pure nonsense to say that God's knowledge of the existence of Neptune is what we mean by the existence of Neptune. For we should then have to say that what Adams and Leverrier discovered was not Neptune but the fact that God knew about Neptune." Now, according to the Dean, "this 'pure nonsense' is exactly what the New Platonic Platonism believed to be the truth . . . God does not know of Neptune because He has observed a planet revolving round the Sun in an outermost ring. He knows of Neptune because He made Neptune, and without his sustaining will Neptune could not exist for an instant. Plotinus would say that the real

* *The Philosophy of Plotinus*. Vol. II., pp. 53-55.

Neptune is neither a lump of gases and minerals, nor a notion in the mind of God, but a realized idea, in which it is quite impossible to separate the creative will from the thing willed." "The real Neptune," the Dean adds, "is of course (to the Platonist) immaterial."

Now "pure nonsense" is strong language, but I am inclined to agree that it is very hard indeed to give sense to the sentence "God's knowledge of the existence of Neptune is what we mean by the existence of Neptune." To be sure, when we talk of meaning and sense we are apt to make for ourselves a difficulty which may not be other than one of language, for our claim to have seized the meaning or sense of a sentence commonly amounts to this that we could translate that meaning or sense into other words. But to translate may be to destroy. Indeed, a familiar method of discrediting an argument is to translate it into other words in which though apparently the equivalents of the original words, the argument loses favour even with its warmest advocates. I believe that the method is as often unsound as not; and that it is the translation not the original which may be at fault. But Professor Taylor, I feel sure, uses "pure nonsense" quite literally; he is satisfied that the sentence to which he applies them has no sense at all. And he may be right, and Plotinus wrong. But would it be "pure nonsense" to say that God's knowledge of the existence of Neptune is what *God* means by the existence of the Neptune? That, I think, is another thing.

Professor Stewart* draws a distinction which we may now consider between belief and make-believe. Fancy or imagination, not here distinguished from each other, weave a large context round the little world of common experience. We attain belief when we can harmonize mere and brutal facts with this context and this context with them. It may be a hard thing to do. And weary of the effort or even before attempting

* *The Myths of Plato*, pp. 6-7.

it, we may decide to acquiesce in incongruity : of the mere brutal facts we cannot or may not indeed desire to rid ourselves, but we determine to have something which we discover in the context, or that context itself, undamaged. Professor Stewart cites the passage of Coleridge to which we have already had resort. We make a willing suspension of disbelief in the unreality of either of these worlds as compared with the other, and live alternately in two worlds, passing quickly and frequently from one to the other. But if we pass from one world to the other and back again, we are not indifferent or impartial. We have a preference, and it is for the context of imagination, not for the text, authorized by ordinary or prosaic usage. We go further and say that we must interpret the text by its context (a familiar but difficult exercise) if we are to find a meaning in the text or to give it a meaning ; for though no doubt it may be that the text in its context is as a point of bright light in a less brilliant circle, the centre from which its boundaries are seen and traced, it may also be that the context is a " universe " *in* which the text is a very little matter and *out* of which it is still less. In these figures of speech a relationship, intimate and natural, is claimed for text and context, the two ought to make a consistent and orderly whole. But sometimes the two will not agree. And if we are to cleave to the one it appears that we must forsake the other. Even when a reconciliation is possible, or an adjustment actually made, I believe most men have a preference—being able to make the best of both worlds, they yet are quite sure which is the better world ; it is the world of context, not the world of text : when they are driven upon a choice, they do not hesitate, the fact of attested experience may slip through their careless fingers, but they will hold firmly to the truth, to that other thing of which they need no confirmation. The bigger is also the better world. The bigger is also the better part of man's nature, which " is not articulate and logical, but feels and wills and acts . . . it "

cannot explain what a thing is, or how it happens, but feels that the thing is good or bad, and expresses itself not scientifically in "existential" or "theoretic" judgments, but practically in "value-judgments" or rather "value-feelings." "After all," continues Professor Stewart,* "however high (man) may rise as 'thinker' it is only of 'values' that he genuinely thinks, and the ground of all 'values'—the value of life itself—was apprehended before the dawn of thinking, and is still apprehended independently of thinking." If this is for some minds an attractive doctrine, it must also be even for them a hard saying—for the distinction drawn between thinking and valuing, if we are to accept it, not merely sets a gulf between two processes but cleaves human nature itself into alien and hostile or at least into irreconcilable parts. Some men, it is true, are willing and some even eager to accept it, but (others who may well appreciate this distinction) may yet be little disposed to acquiesce in it. A house that is divided against itself may stand for a time, but they do not trust it to stand for ever, and they could not live quite happily in it even if it did.

I cannot believe that the difficulty is to be overcome by the acceptance of what seems to be implied in a passage in Professor Webb's "God and Personality" (pp. 167-9) in which asking "what relation . . . did the myths of Plato bear to his philosophy," he answers, "I think that with him the myth is not concerned, strictly speaking, with the same subject-matter as Philosophy, but rather takes the place of History, where a historical question is asked, but the materials for an historical answer are lacking. How did the world come into being? How did society begin? What will happen to our souls after death? It is to such questions that Plato offers replies in the form of myths. Philosophy cannot answer such questions; any more than it can tell me where I dined this day last year or where I shall dine this day next year. For an answer to the former of

* Stewart, *op. cit.*, p. 21.

these two inquiries I should consult my personal memory or my journal, and if I wished for information about something that happened before I was born, I should seek for it in the history books. But if what I want to know must have happened at a time whereof there is no record extant, what can I do? The best I can do, says Plato, is to frame a myth, a story which, if not the truth, will at any rate be like the truth. (*Republic* 382D.) But this cannot merely mean that it is to be like what actually occurred, for *ex hypothesi* I do not know what did occur, and hence cannot tell what would be like it and what not."

It may seem both impertinent and ungrateful for me to criticize so profound a writer as Professor Webb, to whose works I have owed very much more than I can here fitly tell; but I confess I cannot distinguish, as he appears to distinguish, between the subject matter of philosophy and the subject matter of history.

How is the difficulty in which we are placed to be overcome? Let us state the difficulty as clearly as we may. It is this, we cannot live securely in two worlds, but in one only; yet in fact we find ourselves or seem to find ourselves in two and not in one. Of the two one is insistent and hard, and for all its smallness seems to be shared by our fellows; the other is luminous but ill-defined, its very brightness blinding the eyes which survey it; and it is large, and yet its amplitude touches the heart with an ironic loneliness, for where there is room for many, for all mankind, the amazed inhabitant has no companions. How then, when he returns from this region, is he to give any account of it to other men who are strangers to it? How, indeed, is he to give any account of it to himself, when he limits his thought and his utterance to the conditions of the narrower world to which, willingly or not, he goes back? A *revenant*, a ghost, he attempts in vain the conversation of an alien world and a smaller self. He may hope that his returns will become rarer and rarer, and that upon each visit the world of waking will become less and

less till it finally disappears or ceases to be, and a further visit will be as little possible as it is little desired. But till then, if he is honest, he must acknowledge that there are two worlds. And his amphibious life is not made any the easier for him by the figures of speech which he uses for his account of the larger of his worlds, the world of context. For he speaks of it as a world of dreams or even of dreamless sleep, and it is hard for him to convince even himself that what he calls dream or sleep is more real, or more important, than what the use of that figure compels him to call, in contrast, the world of waking. In the world of waking he may, it is true, move awkwardly, as being less at home in it, than in the other ; but the very fact that he calls it the world of waking is evidence, brought by himself against himself, to show that he regards it as in some sense more real. He would wish that it were otherwise, and that he could call that context the waking world and this text the world of sleeping. Sir Thomas Browne in a well-known passage of *Religio Medici* "Of Dreams" makes the inversion with beautiful daring. "Surely it is not a melancholy conceit to think we are all asleep in this world, and that the conceits of this life are as meer dreams to those of the next ; as the Phantasms of the night, to the conceits of the day. There is an equal delusion in both, and the one doth but seem to be the emblem or picture of the other ; we are somewhat more than ourselves in our sleeps, and the slumber of the body seems to be but the waking of the soul. It is the ligation of sense, but the liberty of reason, and our waking conceptions do not match the Fancies of our sleeps"—the doctrine which he announces in this rhythmic prose, he expresses even more certainly in the smooth and languorous verse into which it passes by imperceptible gradations :—

These are my drowsie days ; in vain
I do now wake to sleep again ;
O come that hour, when I shall never
Sleep again, but wake for ever.

And if anyone should say of this doctrine "it is pure nonsense," it would be idle to contradict him. The difference between these two worlds seems to be this, that in the one, for everything that we know we can, as it were, give a reference. "Believe me or not," we say to the critic; "but ask A, B and C—they will verify what I say, and further you can with your own eyes trace a sequence in which this thing that I say I know has its position and with its position its reason." But in the other world there are no things, no separable and separate knowledges or experiences; it and its contents are one, so that to know them is to know it, and to know it is to know them, and more than that—for this is the ultimate difference—to *know* that world is to *be* that world. God's knowledge of the existence of Neptune is not to be accounted for by the fact of His having observed Neptune, but by the fact of His being Neptune, and Neptune being God in that aspect of his being.

It is not necessary to cite the words of religious writers, I mean of religious men who have happened to write about themselves—for passages occur readily enough to the mind in which it is claimed that he who knows or sees is already one with what he sees or knows; he is taken up into his world, which is the whole world for him, and for the reality of which he neither could seek any proof to offer to another nor would tolerate any if offered to him. God cannot offer credentials—miracles afford no evidence. Yet they are, as illustrations or images, so convenient as to be natural and necessary. They are modes of speech, instruments of communication and of record. We are sometimes rapt, or absorbed, or we become one with some experience, which fills for us our world. Of that experience or of that world we desire to tell our neighbours or to tell ourselves. I think the desire to tell rarely arises till the experience is already fading and failing, till that world, if not shattered, has suffered some shock or diminution. For till then speech which is dis-

criminating and analytical could find no gap by which to enter. Now how are we to describe an experience which was so complete, a world which was the universe? We cannot describe it in terms of itself, and perforce choose terms which are appropriate to something else. The very essence of a miracle is that it could not happen in the region *in* which the speaker is when he is speaking, and in the region *of* which he is speaking it would not be a miracle; his purpose is to picture one world for the benefit of persons who live in another, and even for his own advantage when he has abandoned or been driven from the world of that sublime experience into a world of experience not sublime, or when he stands dangerously poised with a foot in each of two worlds which are moving rapidly apart. He wishes to convince his hearers and himself that what happened to him there, what he saw or heard there, really happened, that he did see and hear those things. And he can but use figures, or images, which were unnecessary in the world which he now wishes to picture while he was still in it, and which, unhappily for his present purpose, are ill-adjusted to the world to which he now must pay heed. Let us suppose that the condition in which he was in that world seems to him to be best suggested by the image of flight; he must ask himself and his hearers now to believe, if they are to get any knowledge of that condition, that a heavy body, himself in fact, can be supported in a lighter element, or that he could and did assume and use wings which it is evident that he possesses no longer. He asks them, for a special purpose, to frame and hold fast an hypothesis, which is plainly inconsistent with what they know of the world to which they belong—an hypothesis which would have been quite superfluous to him in the other world, and would be equally superfluous to them if they could enter it.

Grant that his speech is not too clumsy, and that his sincerity is not doubted—what is the effect of this creation and this use of

images for the speaker and for those to whom he addresses himself? Commonly, I suspect, it is the acceptance of a world intermediate between the world of rare, sublime and individual experience, and the world of ordinary, level and common experience—the acceptance of such an intermediate world as of a pleasant resort not too difficult of access for a holiday, for a change. A breath of spring may come with sudden marvellous warmth and fragrance upon a northern February day, and our hearts turn southwards; and we may believe ourselves there, where our hearts are, ready to greet the flowers, to feel the softening earth, to gaze upon the clear and welcoming sky. Something without us or within may put us into the mood for hypothesis; we may even act upon it. But Browning has said all this for us, and we may borrow his words:—

“ . . . Sometimes when the weather
Is blue, and warm waves tempt
To free oneself of tether,
And try a life exempt

From worldly noise and dust,
In the sphere which overbrims
With passion and thought—why just
Unable to fly, one swims!

By passion and thought upborne,
One smiles to oneself—“ They fare
Scarce better, they need not scorn
Our sea, who live in the air!”

Emancipate through passion
And thought, with sea for sky,
We substitute, in a fashion,
For heaven—poetry:

Which sea, to all intent,
(Gives flesh such noon-disport
As a finer element
Affords the spirit-sort.”

We admit that there is, or may be, a "finer element," but this—well this is as far as we can go, and it is good enough for us; "to all intent" we get here what our informant assures us he got elsewhere in a region higher and rarer than we have time or courage to reach. It may be that our informant may quickly adapt himself to our languor or our necessity. He did, yes, he insists upon it, he certainly did once make his way to the Côte d'Azur; but "come with me," he says to us, "to the Cornish Riviera; you will get there something like what I saw; you will get some notion of that better place. We yield to his entreaty, and are enraptured with what he shows us. He may even persuade himself to pay equal tribute to the claims of thrift and of happiness, and come to believe that the substitute is better for himself. But Nemesis lies in wait and will soon lay her hand on him and his companions. This holiday place is well enough for a time, but we tire of it before long; we want to go home, and so does he. We seek an abiding city, and betake ourselves to Manchester or Sheffield; we have return tickets.

But let us hear Browning again:—

" And meanwhile, yonder streak
Meets the horizon's verge;
That is the land, to seek
If we tire or dread the surge:

Land, the solid and safe—
To welcome again (confess!)
When, high and dry, we chafe
The body and don the dress."

Some day, perhaps, we shall revisit Cornwall: but home we go, to our own place, carrying with us memories bright now, to lose something presently of their brilliance. But what of him? He is aware that he has shown us not what he saw under fairer skies, but only "something like it"—and if we do not know the difference, he does. What then is he to do? He can, I think, choose between three courses. The worst is this; he may

say that what is good enough for these good men ought to be good enough for him who is no better than they; he may teach himself first to endure and then to enjoy Manchester or Sheffield, cherishing the hope of a visit now and then to Cornwall. He may make himself believe that Cornwall is, as the railway companies assure him, the Riviera, and a fit place for an occasional and not too extravagant holiday. Or, since he is bound to return to the place where he earns his living, he may still long for that other place—the genuine Riviera, fancy himself there, and spend an uncomfortable existence blaming himself for day-dreaming when he ought to be minding his business, and for becoming engrossed in business when he might, and as he likes to tell himself, when he ought, to be revelling in the beauty of a scene which he can still recall, though he may seldom revisit. Condemning himself in practice to an amphibious condition, he will wretchedly long to be one thing or another, to set himself firmly in this element or in that.

Or, and this is the third course open to him; physically, materially, to all appearances, he may go back to the dim regions of prosperous manufacture and merchandise, of schools and colleges, and conduct his affairs there, perhaps with more than ordinary success, as success is counted. And he may not go back to the Riviera: but the reason why he never goes back, is that he has never left it. Those skies are his wherever he may be, those mountains and those seas are his. They are real for him; they are reality. And the effort of make-believe, for he has to make an effort, is directed not to establishing upon an hypothesis, what already rests upon sure foundations, but to inventing a scheme, a system, a world in which Manchester and Sheffield can have an intelligible (though eminently artificial) place. He may have a genius for business, a flair for investments, a quick invention: but he is called "a visionary," by those who perceive or suspect that his gaze is for ever fixed upon another

scene, which they themselves cannot see. And if he overhears what they say, he can only offer a reply which must be either unconvincing or unnecessary. His reply must, I think, be that of Wittgenstein*, unconvincing until those others share his experience and unnecessary when they have shared it. "The sense of the world must lie outside the world. In the world everything is as it is and happens as it does happen. *In* it there is no value—and if there were it would be of no value. If there is a value which is of value, it must lie outside all happening and being-so. For all happening and being-so is accidental. What makes it non-accidental cannot lie in the world, for otherwise this would again be accidental. It must lie outside the world."

* *Tractatus Logico-Philosophicus*, 6, 41, p. 183.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C. 1, on June 16th, 1924, at 8 p.m.*

XIII.—SOVEREIGNTY.

By A. D. LINDSAY.

THE theory of sovereignty is at the present time the storm centre of political theory. For one school it is the ark of the covenant. Sovereignty is for them "inherent in the very conception of government." For another school it is nothing but a stone of stumbling. Dr. Figgis attacked the theory of sovereignty in the name of the Church ; Mr. Cole and Mr. Laski appear to think that the essential preliminary to any solution of social questions is to get this anachronistic theory out of the way. Professor Duguit's works which are beginning to be known in this country are largely devoted to proving that the whole conception of sovereignty is nonsensical from beginning to end.

Further the upholders of the doctrine are not nowadays as clear as they used to be what that doctrine is. Even in juristic circles where the credit of the doctrine is usually highest, it is more often referred to with reverence than explained. The Austinian theory of sovereignty is, of course, lucid and definite, but one gathers that lawyers nowadays have their suspicions as to the soundness of Austin. It is more difficult to gather how exactly they think that Austin's theory is to be amended. Such difficulties are not confined to the realm of theory. The Irish negotiations in 1921 nearly broke down because the two sides were at cross purposes as to the meaning of the term "sovereign state." Some of the trouble with the Turks at Lausanne came from their sensitiveness to any proposals which might impair their national sovereignty. The League of Nations is continually

being criticized and hampered in its action by the argument that it must not infringe on the sovereignty of its constituent states, and various provisions in the Covenant have given lawyers the opportunity of showing the impossibility of many of the arrangements proposed by asking the mysterious question "Where does the sovereignty reside?" in a way which admits of no answer.

I propose to begin by a consideration of Austin's doctrine, for most modern juristic theories go back to him, and it is possible to understand what he meant by sovereignty.

Austin approaches the doctrine of sovereignty with the purpose of defining law. He wishes to distinguish between "laws properly so-called and laws improperly so-called," and he takes his stand on the doctrine of Hobbes that "law is the word of him that by right hath command over others." Law, that is, is essentially a command; a command becomes law in virtue of a previously existing relation between him who commands and him who obeys. In order that there should be law there must be a distinction in society between the sovereign and the subjects.

The originality of Austin's theory is that he gives up all attempts to derive the right of the sovereign from a supposed social contract or any other quasi-legal relation, and finds the previous relation between him who commands and him who obeys, in virtue of which the command is a law, to consist in the fact that the latter has been in the habit of obeying the former who has not been in the habit of obeying someone else. Austin, that is, takes seriously the doctrine that law is based on sovereignty and therefore does not attempt to base sovereignty on law. Sovereignty for him is based on fact.

This leads to the famous definition of sovereignty: "If a determinate human superior, not in the habit of obedience to a like superior, receive habitual obedience from the bulk of a given society, that determinate superior is sovereign in that society,

and the society (including the superior) is a society political and independent."

The definition is, as it stands, circular. For it would be impossible for Austin to define superior except in terms of sovereign. But other passages show that the word is not essential to the definition and that for "superior" we may read "person or persons."

There are clearly two aspects of the doctrine which must be distinguished: the relations of the sovereign to his subjects or the internal relations of a political society, and the relation of the society so constituted to other societies or the doctrine of the "political and independent society." The second aspect, which is now the most alive part of the Austinian doctrine, is really consequent on the first. Within the second aspect we shall have to distinguish two questions not distinguished by Austin, the relations between one political society and another, and the relation between a political society or its sovereign and non-political societies.

Let us begin by examining the first aspect of Austin's doctrine. Austin does not say in his definition why the bulk of the given society obey. He is neither concerned with the psychological basis nor with the moral justification of government. These are not to his purpose. He does in a later part of his lecture give a fairly adequate account of the various motives which lead men to acquiesce in government, and as a Utilitarian he has an answer to the problem of moral obligation. But the merits or demerits of his views on these matters need not concern us, because they have nothing to do with his definition of sovereignty. All he wants for his definition is the fact of obedience, however brought about and however justified. If there is that, there is law; if there is not that, there is not law. He points out that "bulk" and "habitual" are not precise words, and justifiably says that it is not possible to fix the precise point at which a political society

passes into anarchy. It follows from this that the position of the sovereign does not rest on law but on fact, the fact of obedience, and that in Austin's theory it is nonsense to talk of the legal basis of sovereignty. It is, indeed, obvious that if sovereignty is the basis of law, law cannot be the basis of sovereignty. On that point Austin is perfectly consistent. Some critics, Sir Henry Maine among them, have contended that Austin's sovereignty rests on force, but that is untrue. Austin's sovereignty rests on the fact of habitual obedience by the bulk of a society. The sovereign uses force. For it is the mark of positive law for Austin that it is enforced. But the sovereign has force to use only because it is obeyed from motives other than fear of compulsion by the bulk of society habitually. Force is needed (though Austin does not make this point) to fill up the gap between the "bulk" and the whole, and between "habitually" and always. Law, if it is to be law, claims obedience from all the members of a society and from them always. A sovereign exists if the bulk habitually obey.

With the notion that law rests on the fact of obedience Austin combines the notion that law must issue from a determinate person or persons. Austin's sovereign is and must be determinate, a person or body of persons who can give a determinate command. This is clearly for a lawyer essential. It is essential to law that it should be known and definite. There are various theories which seek to escape certain difficulties in Austin's account of political society by retaining the conception of sovereignty and transferring it from a determinate person or persons to something indeterminate—the nation, as the orthodox French theory holds, or the state, as in German theory, or the general will. All such theories really destroy the doctrine of sovereignty as Hobbes and Austin conceived it, for they destroy the notion that sovereignty is the standard by which we know whether a given rule is law or not.

Austin is here making what is in itself an obviously sound point. If we give up his first point that the fundamental fact which makes law is that certain persons are obeyed, we must retain the second in some form. It can be put in a way that avoids the implications of the Austinian doctrine that law is essentially a command of someone who is obeyed, if we say that, whatever the ultimate source of the authority of law may be, so long as it is other than a determinate person regarded as having in himself the right to command others, it is something the application of which to particular cases is a matter of dispute ; if therefore society is to avoid anarchy, there must be an agreement as to what determinate persons shall say what law is. The fact that you cannot have law without such a determinate declarer of law does not mean that law is the command of that person. In any society which rests on the conception of law, *i.e.*, on the general acceptance of a code of law or of a constitution, it is still needful, as in Mohammedan countries or in the United States, to have certain determinate persons to say what the law is. If you want to know whether a thing is lawful in a Mohammedan country, you ask the Sheik-ul-Islam ; for the same information in the United States you go to the Supreme Court. The existence of positive law depends upon the general acceptance of such authority. But the decisions of the Sheik-ul-Islam or of the Supreme Court are not properly described as commands. These determinate agents regard themselves as declaring or explicating or applying an existing system of law, in the one instance the law of the Koran, in the other the Constitution of the United States. Matters are not essentially different under modern Parliamentary government. If you give up, as you must if you are to be true to the facts, the notion that the fundamental fact of the political situation is that the persons constituting Parliament are obeyed by the rest of the population, and find the basis of authority in the state or the nation or the people, it will remain true that there must be some determinate means of expressing what the state or

the nation or the people will. It is more true to the facts of modern constitutional government to describe the legislative work of Parliament in terms of the work of a judge, to think of it as making explicit and definite an authority which is not its own, than to regard it as consisting of a certain number of persons having unlimited right of commanding other people. But however much we regard it as not the source of authority but as the instrument of an authority which is not its own, it is still an indispensable instrument. Without such a determinate instrument there could be no government.

The peculiarity of the Austinian theory of sovereignty is just that it combines these two doctrines, the doctrine that there can be no law without determinate persons to express and execute it, and the very different doctrine that the source of law is the relation of commanding and obeying with its corollary that this political relation of commanding and obeying is prior to law, not dependent upon it.

Such a doctrine of sovereignty does roughly describe the absolutist states of the seventeenth and eighteenth centuries, in the defence of which the doctrine originated. It was true of them to say that the fundamental fact about them was that the great bulk of the people accepted for whatever reasons the authority of a determinate person. The mediæval theory that the sovereign, though above positive law, was himself subject to the law of nature had been given up. Dr. Figgis has pointed out that this political development had its parallel in theology, both Protestant and Catholic theology in this period finding the basis of moral authority in the will of God, actions being morally right because God commanded them. As the mediæval state had no room within its borders for those who did not accept its religious basis, so the post-Reformation state had no room for those who were not prepared to take the oath of allegiance. The theory of the divine right of kings and Hobbes's more sophisticated

utilitarianism are alike rationalizations of this fundamental fact, the acknowledgment of the authority of the monarch. The significance of the theory is that the source of authority and the source of determinateness in law are the same. In the person of the monarch there is a coincidence, not otherwise found in politics, between what Jellinek has called the social and the juristic aspects of the state. The social fact that matters is that men obey the king, the juristic fact is that law is what the king commands. That is the engaging simplicity about absolute government. The question of interest nowadays, however, is whether, when constitutional government has been substituted for absolutism, the theory of sovereignty can still stand. If constitutional government is described as limited government, that is clearly impossible, for the basis of authority will then be the acceptance by both people and government of a principle of limitation; in other words, of law of some kind. Hobbes and Austin seeing that the sovereign in their sense cannot be limited, have to maintain that the difference between absolute monarchy and what is called a limited or constitutional government lies not in the attitude of the governed to the government (that remains and must remain the same) but in the number of the persons constituting the government. The sovereign may be a person or persons, a man or assembly of men. The number constituting the sovereign may increase until it includes the great mass of the persons in the society. The relation of those who command and those who obey still remains the fundamental fact in politics. Austin says that as a matter of fact all governments are either monarchies or aristocracies, for there are no societies in which all the members of the society are members of the government, but he does hold it to be a theoretical possibility that there should be such a society. It would be, I presume, one in which there were no children. He held that in the England of his time sovereignty resided not in the King, Lords and House of Commons, but in the King, House of Lords and the Commons,

the House of Commons being regarded as having powers delegated to it by the Commons at each general election. Democratic theory on the whole followed this line, retaining the Hobbesian doctrine of sovereignty in all its absoluteness but putting in place of the sovereign monarch the sovereign people.

This progress from one to a few and from a few to many seems harmless, but by the time that it is finished the theory of sovereignty has become very different. We begin with Austin's fundamental position that, in order for there to be law, society must be divided between sovereign and subjects—those who command and those who obey. But Austin apparently thinks it possible to transfer everyone to the side of those who command. Can anyone say that the fundamental fact about the government of this country is that paupers, criminals, lunatics, males under twenty-one and females under thirty obey the rest of the community? If you make the government consist of the mass of the people, the distinction which was to be fundamental practically disappears.

The orthodox answer to this objection no doubt is that we must distinguish individuals in their capacity as subjects and individuals in their capacity as part of the sovereign. But this answer is itself enough to show that a new theory has been introduced, for the distinction implies a principle in virtue of which it can be drawn, and the sovereign will be limited because constituted by that principle. For in what sense can laws in a non-monarchical state be said to be the commands of the persons constituting the sovereign? How is it possible to obey a number of persons? No doubt if they all always command the same thing it is possible, but such unanimity is not found. A number of persons can be obeyed only if the decision to which they come by following some agreed method, majority or two-thirds voting, or agreement of majority votes in both Houses of Parliament, is to be regarded as what they command. But that means that

the individual members who constitute the sovereign are obeyed as persons only so far as their actions conform to a rule, as, for example the rule that the decision of the majority shall be regarded as what they command. Once therefore the sovereign ceases to be a single individual, there must be some sort of constitution, however elementary, in virtue of which the sovereign is obeyed.

Austin placed sovereignty in the United States in the body which has power to change the constitution. If we disregard the difficulty in placing sovereignty in a body which has issued nineteen commands in a hundred and thirty years, there is still the impossibility of saying that agreement to obey the constitution prescribed by a proposal of two-thirds of both Houses of Congress or by an application of two-thirds of the States Legislatures and ratified by three-fourths of the States Legislatures is agreement to obey certain determinate persons. The point need not be laboured. It is surely obvious that the main fact about all modern constitutional governments is not that the bulk of the society obey certain persons, but that they accept a certain constitution and that they obey the commands of the government, *i.e.*, of certain determinate persons, because they have got into authority through the working of the constitution and in so far as their commands are within the limits of the constitution. This is equally true of a country like our own, where the constitution is largely unwritten as it is of the United States.

This fact, that the persons who constitute the government, be they few or many, cannot act as a government except as in so far as they conform to certain principles, if it is only the principle of majority voting, shows that there are constitutional principles which are not commands of the sovereign. For the sovereign can only be the sovereign if these principles are obeyed.

If this be so, the fundamental fact about a constitutional state is not that the bulk of its members obey a determinate person or persons, but that they are agreed in the acceptance of what Austin would call certain principles of positive morality, but what we must call the law of the constitution, not a fixed code of law, but certain principles of action. These principles are of such a nature that they provide certain persons who are empowered to issue commands within the limits of the constitution, certain persons who are empowered to determine the application of these principles to particular cases and certain persons who are empowered to change and develop the principles themselves. The relations of these classes of persons may vary; they are obviously very different in this country and in the United States; but their relations are determined by the constitution. The people's obedience to law does not rest on its obedience to these persons or to any portion of them; its obedience to these persons is derived from its obedience to the constitution.

The mediæval state, which rested on obedience to law, was replaced by a state which rested on obedience to a person, where law was derived from a sovereign and subordinate to government. The modern state has returned to the basis of law, but the law on which it rests is not now to be regarded as a code of commands and prohibitions, but as principles governing men's relations to one another, a method according to which commands and prohibitions are produced. These principles provide for their own development and produce organs for their application to particular cases. To such a system the theory of sovereignty that rests on the conviction that obedience to law is derived from obedience to persons is entirely inappropriate.

As constitutional government developed, political theorists tried to describe it in terms of sovereignty. They began by making the persons obeyed determinate but more numerous.

Then Rousseau and those who came after him, especially the Hegelians, gave up the determinateness, which was the sound part of the old theory and kept the obedience to persons, which was now out of date, and invented a new kind of person, the people, the general will, the state or the nation, distinguished from the individuals composing the community. They kept the form of the sovereignty by describing the state or the people thus conceived, in face of the facts, as persons who could will and issue commands. It is a curious illustration of man's habit of describing new facts in terms of old, that seventeenth and eighteenth century theorists tried to describe their new state in terms of the feudal facts of contract, while the nineteenth century has tried to describe its new facts in terms of the seventeenth and eighteenth century facts of absolutism.

As, however, it is not a sufficient criticism of the social contract theories of the seventeenth and eighteenth centuries to point that the social contract theory is, taken literally, nonsense, neither is it enough to point out that the theory of sovereignty as applied to a constitutional state is, taken literally, nonsense, though nonsense it is. As we ask what Hobbes was trying to say in the inadequate language of contract, so we must ask what the modern upholders of sovereignty are trying to say in the inadequate language of sovereignty.

We can best get at this by asking what view of the state we get if the doctrine is simply abandoned. If it is a sufficient account of the state to say that it rests on the common acceptance of a law or principle of such a kind that it involves a definite organization, the state will not differ from other associations, all of which may be described as resting on similar principles of organisation. Some opponents of the theory of sovereignty are prepared to accept the position that the state is one among many other associations which differ from one another only in the

purposes they serve, and that consequently where any conflict arises between the state and other associations men's support of the state is based solely on their conviction of the superior importance of the state's function. This is very much the position taken up by Mr. Laski. He has pointed the absurdity of the Austinian view that men's loyalty to other associations is derived from their loyalty to the state, that they obey other associations, their Church or their Trade Union, only in so far as and because the state has from its sovereignty delegated certain powers to these other associations. If that were really so, there could be no conflict between the state and other associations. The history of the Kulturkampf is enough to disprove such a doctrine. Men's loyalty to their church is as original as their loyalty to the state, and it is impossible to lay down beforehand that whatever attitude the state may take up to the church, individuals either will or are bound to support the state.

It is true that men's support of the state depends *in the long run* on their sense of the importance of the functions which the state performs. But the state differs from other associations in this ; that whereas in a conflict between a church and a trade union, the issue would be decided by men's judgment at the time on the merits of the case, men's obedience to the state is not so left to their judgment on each particular occasion of the superior importance of the state's function. To suppose that it is or could be is to ignore the importance of the fact that the state insists on a monopoly of organized force and to misunderstand the part which such force plays in society.

Now it is clear that the upholders of the importance of the doctrine of sovereignty are especially conscious of the vital connexion between the state and force. "The command of the militia without other institution maketh him that hath it sovereign," said Hobbes. The doctrine stands for the conviction that govern-

ment is essentially different from association ; it is a unique relation ; the state is not one among other associations ; it claims to be above them. Sovereignty, it is said, is in its nature unlimited. This way of looking at the state may be summed up in Washington's words " Influence is not government."

When we try to find justification for this view of the indisputable paramountcy or the irresistible might of the state, it is impossible to find any characteristic of the state's purpose, which will guarantee that in any conflict between the state and another association, the church, for example, the state is necessarily to be preferred, or to show that the force yielded by the state is always irresistible. Yet the state always claims to be paramount and always acts as if its force were irresistible. The explanation of this persistent claim is that it is of the essence of the state to use organized force in defence of its purposes, not simply to rely on their finding support as occasion arises. In any actual choice therefore between the claims of the state and other claims there is on the side of the state a factor which is not to be found on the other side, which makes the claims of the two sides in a certain sense incommensurable. No doubt in actual fact the state's force is not unlimited ; if it relies on its force alone, as it is sometimes tempted to do, it raises force against it ; in practice it negotiates with associations like trade unions as though they were independent powers ; it constantly challenges a comparison of the value of its purposes with the value of the purposes of other associations. Nevertheless, its attitude is continually affected by the fact that it controls this instrument of organized force for the execution of its purposes and that it is its business to maintain a monopoly of such force.

This does not mean that the state rests on force. On the contrary, its force is used to maintain a legal, that is, a peaceable, means of settling disputes, and its strength lies in the fact that

the great mass of its citizens are in the last resort prepared to fight if necessary for what the state stands for, the maintenance of the constitution.

The essentials of the problem can be most easily understood if we consider the nature of the change involved when the Confederation of the American States became the United States of America. The Confederation had relied on the sense of common interest and common obligation in the separate states being strong enough, as each occasion demanded, to meet the situation. In actual experience the pressure of the particular interests and the rivalries of the several states had been so great that the common interests, which all "in a cool hour" would have acknowledged as paramount, tended to go and had gone by default. The formation of the United States of America meant that the people of the Confederate States resolved that their common interests should not go on going by default and, recognizing that these common interests needed special protection, erected a government with enough power, *i.e.*, enough military force to see that they received attention. The result of organizing force in the service of the constitution is to weight the balance in favour of the purposes for which it stands. The state's monopoly of force is the expression of the sense of its citizens that the purposes it represents are so important and paramount that they will have some guarantee beforehand that they will be safeguarded. They are not to be left to men's appreciation of their superior importance from time to time. But the greatest and most decisive of these common interests is just the principle of a legal or constitutional settlement of differences which may arise within the community. When it is said that the Civil War settled the problem of sovereignty in the United States, that does not mean that sovereignty was settled in the Federal Government rather than in the several states. Lincoln did not stand for the principle that in any dispute between the Federal Government and a State

the Federal Government was necessarily in the right. He stood for the Union, and the Union had assigned distinct powers to the Federal Government and to the States Governments and had provided a means for the settlement of any disputes which might arise between them. He was prepared to accept the position which the Constitution had assigned to slavery ; he was not prepared to fight to enforce emancipation on the south ; but he was prepared to fight for the principle that the question of slavery, like all other questions, should be capable of being dealt with by the Constitution, and this was just what the South denied. The Civil War was in the truest sense a war to end war as the purpose of organized force is to stop the arbitrament of force. If sovereignty means that there must be in any state certain persons having at their disposal irresistible force or being endowed with absolute rights, then there is no sovereign in the United States, or indeed in any constitutional state. But if it means that there is something so essential to every state that it needs organized force to protect it, and that the state depends on the readiness of the citizens in the last resort to fight on its behalf, then we can and should talk of the sovereignty of the constitution.

Modern theory, when dissatisfied with Austin, prefers to talk of the sovereignty of the state or the nation or sometimes of the general will. But all such conceptions assume that sovereignty must reside in a person ; they still stand on the sixteenth century doctrine that obligation is primarily to a person, not to a law. They are all involved in what Duguit calls the doctrine of subjective rights, the doctrine, namely, that there *are* persons who just ought to be obeyed as such. No account of the modern constitutional state is possible on that basis. The truth of this contention is seen in the fact that though such conceptions may avoid some of the difficulties of Austin at the expense of losing Austin's definiteness, they are equally with Austin incapable of doing justice to the facts of the federal state.

If sovereignty is inherent in persons, either individuals or communities supposed to be persons, there cannot be two sovereigns in a state, and the separation of powers in a federal state must be unreal. But it is of the essence of federalism that the federal government and the governments of the several states have their separate spheres of power and that the relations between them are not, as are relations between members of an alliance, settled by give and take as occasion arises, but by a constitution which all parties acknowledge.

The constituent members of a federal state are unlike the parts of a unitary state in that they have a sphere in which the federal government has no competency, within which, to use common language, they are in the same position as what are called sovereign states; they are unlike independent sovereign states, in that they recognize another authority outside that sphere, and further agree to a common way of deciding what matters fall within their sphere and what do not. Independent "sovereign states" have relations with one another, and take common action for their common interests, but because their action towards one another is dictated by their sense of what is the best policy from time to time, they form occasional alliances and not federal states. They are ordinarily more ready to fight for the principle that they are not bound to take common action or submit to any fixed rule of arbitrament between themselves than for its opposite. Their armed force protects the principle that their constitutional machinery shall settle disputes within their own borders, but their submission to law within has ordinarily been accompanied by a denial of law without.

It is characteristic of the Austinian doctrine that it reduces the state to the sovereign and therefore reduces the world to a number of independent sovereigns, between whom, on Austinian principles, there can be no law. Austinian sovereignty is an all or nothing principle. It is impossible to have any law without

a sovereign and it is impossible to have a sovereign without making him the authority over all law. If several states will only unite for common purposes on the understanding that they are left to the unfettered disposal of their particular purposes, they cannot, on Austinian principles, form a state. But the essence of a federal state is just this delimitation of spheres.

It makes independence for certain purposes compatible with union for others and such a state is based on the acceptance of a constitution, for delimitation of spheres or purposes is the main task of a constitution. But a Federal constitution only does more explicitly and strikingly what is done by the constitution of any modern state.

It will now be clear how the second part of the Austinian doctrine, the theory of the independent state, is dependent on the first, the theory that law is derived from the relation of sovereign and subject. If this were a juridical society, I should propose to consider how the theory of the sovereignty of the constitution will affect the theory of the independent sovereign state, both in its relations to associations within the state and to other states ; but I think it will be more in accordance with the purpose of this society if I try to make clear what I am contending for by a criticism of Dr. Bosanquet's well-known doctrine of the sovereignty of the general will.

No one can, I think, view Dr. Bosanquet's *Philosophical Theory of the State* without feeling that in all he has to say of the general will, he is describing something that is real and of very great importance, but most of us are, I think, puzzled why he should describe this something as a will, and in what principles, if it is so described, we discover what the will wills.

What Dr. Bosanquet, in his account of the general will, seems to me to be saying is something like this. We each of us in our various acts of will take for granted a vast complicated background of social relations. Without it we could not live or will at all.

We cannot make it. No one of us can completely know it, and yet we are all immersed in it and we all accept it. If we disregard it or if our actions are based on ignorance of it, our actions will be ineffective and self-defeating. They will therefore be in a sense as non-voluntary as the actions which Aristotle describes which involve ignorance.

I need not recall the wonderful way in which Dr. Bosanquet elaborates his account of the social situation which involves us all or say anything in defence of the truth of his doctrine that what is required of us all is action in the light of the actual social situation rather than action dictated by abstract rules or assumptions of natural right. But this is, after all, only the Aristotelian doctrine that moral action is always individual. It is no reason for postulating over and above individuals willing in a concrete situation some other will of the whole. .

The doctrine as stated so far has no particular bearing on politics, except in so far as it may be used to refute certain political doctrines such as those of extreme individualism which ignore the concrete nature of will. The specifically political aspect of Dr. Bosanquet's doctrine of the general will is his conception of the state as to quote his words, "a working conception of life. It is, as Plato has taught us, the conception by the guidance of which every living member of the Commonwealth is enabled to perform his function." Behind the law and behind the constitution, he would have us remember, there must be in the minds of the citizens of a state some such conception of the whole multifarious life of the society. In actual practice it is always imperfect and fragmentary, but the working of a society depends upon the extent to which such a conception is really operative.

This seems to me a true and profound doctrine, but I cannot see why such a conception or standard should be called a will and treated as a doctrine of sovereignty, and Dr. Bosanquet commits himself to the position that sovereignty is the exercise of this

general will ; it seems to me completely to neglect the juristic aspect of the state, and to leave no room for what the lawyer is getting at when he connects law and sovereignty. Dr. Bosanquet's state "includes the entire hierarchy of institutions by which life is determined, from the family to the trade, and from the trade to the Church and the University. It includes all of them, not as the mere collection of the growths of the country, but as the structure which gives life and meaning to the political whole, while receiving from it mutual adjustment and therefore expansion and a more liberal air." If that conception of the state is accepted, there is no sense in asking, as a lawyer must ask, what is the difference between one social rule and another, in virtue of which one of them is to be obeyed because it is law? For on that definition of the state influence is government.

Now, no doubt, while influence is not government, there can be no government without influence. The juristic aspect of the state is not self-contained, law would be impossible without innumerable relations which are not juridical. The body politic of the state can only move because the rigid skeleton of political machinery is clothed upon with living and growing tissues. But political theory, while it is not the same as jurisprudence, must take some specific account of the juristic side of the state—must recognize the existence of the skeleton. Dr. Bosanquet described his theory of sovereignty as diametrically opposed to the Austinian. It is not opposed to it because it is not dealing with the same question. Austin is trying to explain the specific authority of law—an authority which implies that the mere fact that a rule is law is *a* reason for obeying it apart from its rightness or anything else ; Bosanquet is showing that the real basis of law, as of everything else in society, is the whole life of society. But he supplies no link between this common life of society and the political machinery. A nominal bridge is indeed supplied by calling this common life of society the general

will and calling it sovereign, with often the tacit assumption that the political machinery, however it is working, has the authority of the common life behind it. To say that the whole complex life of society is a person, has a will and issues commands, seems to me to be based on the vicious doctrine of the Austinian theory that law is a command. The theory of the sovereignty of the constitution which I have been advocating, maintains that the will between the social and juristic aspect of the state is the adherence by the great mass of the members of a society to a definite principle of settling differences.



ABSTRACT OF THE MINUTES OF THE PROCEEDINGS OF THE ARISTOTELIAN SOCIETY FOR THE FORTY-FIFTH SESSION.

The Meetings of the Session were held in the Conference Hall of the University of London Club, Gower Street, London, on Monday Evenings, at 8 p.m.

November 5th, 1923. Prof. T. P. Nunn, President, in the Chair.

—The President delivered the Inaugural Address : " Scientific Objects and Common-Sense Things." A discussion followed, in which Prof. Whitehead, Mr. Bertrand Russell, Prof. Wildon Carr, Miss Oakeley, Mr. Joad and Dr. Thomas took part. The President replied.

November 26th, 1923. Prof. H. Wildon Carr, Vice-President, in the Chair.—Prof. J. W. Scott : " The Incidence of Mathematico-physical Speculation on Philosophy." Discussion : Prof. H. Wildon Carr, Dr. Thomas, Sir Leslie Mackenzie, Mr. Harley, Mr. Hare, Mr. Howell.

December 3rd, 1923. Prof. T. P. Nunn, President, in the Chair.—Dr. Dorothy Wrinch : " Some Aspects of Scientific Method." Discussion : Prof. Nunn, Prof. Wildon Carr, Mr. Hare, Mr. Hannay, Rev. R. Hanson, Mr. Ionides.

December 17th, 1923. Prof. T. P. Nunn, President, in the Chair.—Mr. R. G. Collingwood : " Sensation and Thought." Discussion : Prof. Nunn, Mrs. Zarchi, Mrs. Hodson, Mr. Joad, Mr. Harley, Dr. Goldsbrough, Mr. Hannay, Prof. Wildon Carr, Dr. Thomas.

January 21st, 1924. Prof. T. P. Nunn, President, in the Chair.—Prof. H. Wildon Carr : " Human Intercourse by means of Speech." Discussion : Prof. Nunn, Prof. Whitehead, Miss Sinclair, Miss Oakeley, Dr. Thomas, Mr. Mead, Mr. Hannay, Mr. Joad, Dr. Goldsbrough, Mrs. Hodson.

February 4th, 1924. Viscount Haldane, Lord High Chancellor, Vice-President, in the Chair.—Mr. K. J. Spalding : " The Presuppositions of Philosophy." Discussion : Lord Haldane, Prof. Wildon Carr, Prof. Nunn, Rev. R. Hanson, Mr. Ionides, Dr. Thomas, Mr. Mead, Mr. Hannay.

- February 18th, 1924. Prof. T. P. Nunn, President, in the Chair.—Discussion: "The 'Academic Mind' in reference to Mr. Joad's *Common-sense Theology*." Mr. Joad, Prof. Whitehead, Prof. Nunn. General discussion: Prof. Wildon Carr, Mr. Hannay, Mr. Mead, Prof. Matthews, Canon Box, Miss Oakeley, Mr. Hughes, Miss Sinclair, Dr. Jessie White.
- March 3rd, 1924. Prof. T. P. Nunn, President, in the Chair.—Dr. L. A. Reid: "Creative Morality." Discussion: Prof. Nunn, Prof. Wildon Carr, Prof. Caldecott, Sir F. Young-husband, Prof. Whitehead, Mrs. Irving, Mrs. Hodson, Mr. Harley, Dr. Matthews.
- March 17th, 1924. Prof. A. N. Whitehead, Vice-President, in the Chair. Dr. Camillo Pellizzi: "The Problem of Religion for the Italian Idealists." Discussion: Prof. Wildon Carr, Prof. Hans Driesch, Prof. Whitehead, Rev. A. Wood, Rev. R. Hanson, Mr. Mead, Mr. Hannay.
- April 28th, 1924. Prof. W. R. Matthews in the Chair.—Dr. F. Aveling: "The Thomistic Outlook in Philosophy." Discussion: Prof. Matthews, Prof. Wildon Carr, Dr. Delisle Burns, Mr. Cator, Mr. Mead, Mrs. Irving.
- May 5th, 1924. Dr. F. W. Thomas, Treasurer, in the Chair.—Prof. A. A. Cock: "Prayer: Psychologically and Metaphysically considered." Discussion: Dr. Thomas, Prof. Wildon Carr, Mr. Mead, Mr. Harley, Prof. Matthews, Dr. Eayrs, Mr. Ionides.
- May 19th, 1924. Prof. T. P. Nunn, President, in the Chair.—Prof. E. T. Campagnac: "Make-believe." Discussion: Prof. Nunn, Prof. Wildon Carr, Prof. Das Gupta, Dr. Thomas, Mr. Mead, Mr. Joad, Prof. Matthews, Rev. I. Walker, Mr. Hughes, Dr. Jessie White, Mrs. Hodson.
- June 2nd, 1924. Prof. T. P. Nunn, President, in the Chair.—Prof. G. Dawes Hicks: "Force and Energy in Nature." Discussion: Prof. Nunn, Prof. Carr, Prof. Das Gupta, Dr. Thomas, Dr. Goldsbrough, Rev. C. R. Shaw Stewart, Mr. Mead, Mr. Cator, Mr. Hannay.
- June 16th, 1924. Prof. T. P. Nunn, President, in the Chair.—Prof. A. D. Lindsay: "Sovereignty." Discussion: Dr. Delisle Burns, Prof. Graham Wallas, Mr. Cole, Mr. Edwyn Bevan, Prof. Whitehead, Mr. Joad, Miss Oakeley, Prof. Wildon Carr, Dr. Thomas, Judge Dowdall, Mr. Cator, Prof. Wm. Caldwell.

July 7th, 1924. Prof. T. P. Nunn, President, in the Chair.—
Annual Business: The Report of the Committee for the Session and the Financial Statement were adopted. The Election of Officers for next Session was approved:—

President : Prof. A. D. Lindsay.

Honorary Secretary : Mr. A. Howard Hannay.

Editor : Prof. H. Wildon Carr.

Treasurer : Dr. F. W. Thomas.

Librarian : Miss Margaret Punnett.

The nominations of six members to serve on Executive Committee were declared effective:—Mr. Gerald Cator, Mr. C. E. M. Joad, Rev. W. R. Matthews, Mr. G. R. S. Mead, Miss H. D. Oakeley, Miss May Sinclair.

The following amendments to Rules III and VII were adopted:—

Rule III.—The first sentence to read: “The Council of the Society shall consist of the President, the Vice-Presidents, the Treasurer, the Editor, the Librarian, the Secretary and six elected members.”

Rule VII.—The word “Committee” to be altered to “Council.”

Philosophical: Prof. H. Wildon Carr: “The Scientific Approach to Philosophy.” Discussion: Prof. T. P. Nunn, Dr. Schiller, Prof. Loewenberg, Mr. Harley, Mr. Hannay, Dr. Thomas.

MINUTES OF THE FOURTEENTH JOINT SESSION OF
THE ARISTOTELIAN SOCIETY AND THE MIND
ASSOCIATION HELD AT UNIVERSITY COLLEGE,
READING, JULY 11-14th, 1924.

Present:—Mrs. Alderson, Prof. S. Alexander, Mr. R. Baker, Mr. R. Bates, Mrs. Beer, Mr. Braithewaite, Dr. C. D. Broad, Prof. Wildon Carr, Mrs. Wildon Carr, Prof. Jacques Chevalier, Mr. E. C. Childs, Dr. Čisař, Mr. F. C. Constable, Prof. Crowther, Prof. W. G. de Burgh, Mrs. de Burgh, Prof. Arthur Dendy, Dr. Beatrice Edgell, Prof. G. C. Field, Mrs. Field, Prof. A. S. Ferguson, Mr. E. Garcke, Miss Gavin, Mr. J. C. Gregory, Dr. J. S. Haldane, Miss Hammond, Rev. R. Hanson, Miss Hare, Mr. J. H. Harley, Mr. J. W. Harvey, Miss Hazlitt, Principal Hetherington, Prof. G. Dawes Hicks, Mrs. Dawes Hicks, Mr. S. E. Hooper, Prof. James Johnstone, Prof. G. H. Langley, Dr. J. Levine, Prof. F. A. Lindemann, Prof. J. Loewenberg, Rev. A. A. Luce, Prof. E. W. MacBride, Dr. J. L. McIntyre, Sir Leslie Mackenzie, Lady Mackenzie, Mr. J. C. McKerrow, Prof. Alexander Mair, Mr. G. R. S. Mead, Prof. C. Lloyd Morgan, Prof. J. H. Muirhead, Prof. E. H. Neville, Prof. T. P. Nunn, Miss Hilda D. Oakeley, Mr. E. E. O'Neill, Miss E. A. Pearson, Hon. Eleanor Plumer, Mr. H. H. Price, Dr. L. A. Reid, Mrs. Roberts, Dr. I. Roth, Dr. F. C. S. Schiller, Rev. C. J. Shebbeare, Prof. J. W. Scott, Miss Elizabeth Scott, Rev. C. R. Shaw Stewart, Rev. F. Seth-Smith, Miss H. M. Smith, Prof. J. A. Smith, Prof. G. J. Stokes, Mr. Joseph Walker, Prof. Clement C. J. Webb, Miss H. Weil, Miss Whetnall, Dr. Jessie White, Prof. A. N. Whitehead, Mr. A. W. Wolters, Mrs. Wolters, Dr. Dorothy Wrinch, Sir F. Younghusband.

Members of the Session unable to be present:—Prof. J. Brough, Prof. A. A. Cock, Mr. W. J. Downes, Rev. J. Drake, Dr. G. F. Goldsbrough, Prof. F. Granger, Mr. C. F. A. Hare, Prof. R. F. A. Hoernlé, Dr. F. B. Jevons, Mr. M. C. Johnson, Rev. F. W. Kingston, Dr. B. M. Laing, Prof. J. Laird, Mr. C. A. Mace, Rev. R. G. Morecombe, Prof. J. W. Nicholson, Prof. Carveth Read, Mr. C. A. Richardson, Prof. Arthur Robinson, Dr. E. S. Russell, Miss Sandtach-Marshall, Prof. Waterhouse.

First Session:—*July 11th, 1924, at 8 p.m.* Prof. W. G. de Burgh: The Inaugural Address. "Metaphysical and Religious Knowledge." Discussion: Prof. Wildon Carr, Mr. Harley, Mr. Constable, Prof. Alexander, Prof. Clement Webb, Prof. Whitehead, Mr. Hooper, Mr. Garcke, Prof. Langley.

Second Session :—*July 12th, at 10 a.m.* Prof. A. N. Whitehead in the Chair.—Symposium : “The Quantum Theory. How far does it modify the mathematical, the physical and the psychological concepts of continuity ?” The opening paper, by Prof. J. W. Nicholson, who was unable through illness to be present, was read by the Chairman. Dr. Dorothy Wrinch, Prof. F. A. Lindemann, Prof. Wildon Carr. Discussion : Rev. C. J. Shebbeare, Prof. Crowther, Dr. Cisař, Mr. Constable, Prof. Neville, Prof. Muirhead. The discussion was resumed in the afternoon at 5.30.

Third Session :—*July 12th, at 3 p.m.* Dr. Beatrice Edgell in the Chair.—Symposium : “The term ‘law’ in Psychology. What are its implications ?” Mr. A. W. Wolters, Dr. J. L. McIntyre, Dr. Israel Levine. Discussion : Prof. Lloyd Morgan, Mr. Thorburn, Prof. Hetherington, Dr. Field.

Fourth Session :—*July 12th, at 8 p.m.* Prof. G. Dawes Hicks in the Chair.—Symposium : “Critical Realism. Can the difficulty of affirming a nature independent of mind be overcome by the distinction between essence and existence ?” Prof. J. Loewenberg, Dr. C. D. Broad and Rev. C. J. Shebbeare. Discussion : Mr. H. H. Price, Prof. Whitehead, Mr. Braithwaite, Mr. Bates, Prof. Alexander, Prof. Muirhead.

Fifth Session :—*July 13th, at 10 a.m.* Dr. J. S. Haldane in the Chair.—Symposium : “The relation between the physical nexus and the psychical nexus of successive generations.” Prof. James Johnstone, Prof. Arthur Dendy, Prof. E. W. MacBride and Prof. C. Lloyd Morgan. Discussion : Sir Leslie Mackenzie, Prof. Wildon Carr, Prof. Stokes, Mr. Bates, Miss Hazlitt, Mr. Thorburn. At an adjourned discussion at 5.30, Prof. Chevalier, Prof. Nunn, Miss Edgell.

Sixth Session :—*July 13th, at 3 p.m.* Prof. T. P. Nunn in the Chair.—Prof. Jacques Chevalier : “Le continu et le discontinu.” Discussion : Prof. Whitehead, Mr. Harper.

Seventh Session :—*July 13th, at 8 p.m.* Prof. J. A. Smith in the Chair.—Symposium : “The Idea of a transcendent deity. Is the belief in a transcendent God philosophically tenable ?” Rev. R. Hanson, Miss Hilda D. Oakeley, Prof. Alexander Mair, Prof. Clement C. J. Webb. Discussion : Sir Francis Younghusband, Mr. J. H. Harley.

RULES OF THE ARISTOTELIAN SOCIETY.

(As amended July 9th, 1924.)

NAME.

I.—This Society shall be called “THE ARISTOTELIAN SOCIETY FOR THE SYSTEMATIC STUDY OF PHILOSOPHY,” or, for a short title, “THE ARISTOTELIAN SOCIETY.”

OBJECTS.

II.—The object of this Society shall be the systematic study of Philosophy ; 1st, as to its historic development : 2nd, as to its methods and problems.

CONSTITUTION.

III.—The Council of this Society shall consist of a President, Vice-Presidents, a Secretary, a Treasurer, an Editor, a Librarian, and six elected members. Every Ex-President shall be a Vice-President. The business of the Society shall be managed by an Executive Committee consisting of the President, the Secretary, the Treasurer, the Editor, the Librarian, and six members elected in accordance with Rule VIII.

SUBSCRIPTION.

IV.—The annual subscription shall be one guinea, due at the first meeting in each session.

ADMISSION OF MEMBERS.

V.—Any person desirous of becoming a member of the ARISTOTELIAN SOCIETY shall apply to the Secretary or other officer of the Society, who shall lay the application before the Executive Committee, and the Executive Committee, if they think fit, shall admit the candidate to membership.

CORRESPONDING MEMBERS.

VI.—Foreigners may be elected as corresponding members of the Society. They shall be nominated by the Executive Committee, and notice having been given at one ordinary meeting, their nomination shall be voted upon at the next meeting, when two-thirds of the votes cast shall be required for their election. Corresponding members shall not be liable to the annual subscription, and shall not vote.

ELECTION OF OFFICERS.

VII.—The Council shall nominate the President, the Secretary, the Treasurer, the Editor and the Librarian for the ensuing session, and shall, at the Annual Meeting, submit the nominations for the approval of the Society.

ELECTION OF COMMITTEE.

VIII.—At the same meeting the six members to constitute with the officers the Executive Committee shall be elected by ballot. Nominations, which must be signed by two members of the Society, must reach the Secretary fourteen days before the meeting, and a balloting paper shall be sent to all members. Members may return their balloting papers by post before the meeting or hand them in at the meeting.

Should a vacancy occur at any other time, the Committee may co-opt a member to serve for the remainder of the session.

SESSIONS AND MEETINGS.

IX.—The ordinary meetings of the Society shall be on the first Monday in every month from November to June, unless otherwise ordered by the Committee. Such a course shall constitute a session. Special meetings may be ordered by resolution of the Society or shall be called by the President whenever requested in writing by four or more members.

BUSINESS OF SESSIONS.

X.—At the last meeting in each session the Executive Committee shall report and the Treasurer shall make a financial statement, and present his accounts audited by two members appointed by the Society at a previous meeting.

BUSINESS OF MEETINGS.

XI.—Except at the first meeting in each session, when the President or a Vice-President shall deliver an address, the study of Philosophy in both departments shall be pursued by means of discussion, so that every member may take an active part in the work of the Society.

PROCEEDINGS.

XII.—The Executive Committee are entrusted with the care of publishing or providing for the publication of a selection of the papers read each session before the Society.

BUSINESS RESOLUTIONS.

XIII.—No resolution affecting the general conduct of the Society and not already provided for by Rule XV shall be put unless notice has been given and the resolution read at the previous meeting, and unless a quorum of five members be present.

VISITORS.

XIV.—Visitors may be introduced to the meetings by members.

AMENDMENTS.

XV.—Notices to amend these rules shall be in writing and must be signed by two members. Amendments must be announced at an ordinary meeting, and notice having been given to all the members, they shall be voted upon at the next ordinary meeting, when they shall not be carried unless two-thirds of the votes cast are in their favour.

LIST OF OFFICERS AND MEMBERS FOR THE FORTY-SIXTH SESSION, 1924-1925.

THE COUNCIL.

PRESIDENT.

A. D. LINDSAY, M.A.

VICE-PRESIDENTS.

G. F. STOUT, M.A., LL.D., F.B.A. (President, 1899-1904).

RIGHT HON. VISCOUNT HALDANE OF CLOAN, O.M., K.T., LL.D., F.R.S.,
F.B.A. (President, 1907-1908).

S. ALEXANDER, M.A., LL.D., F.B.A. (President, 1908-1911).

HON. BERTRAND RUSSELL, M.A., F.R.S. (President, 1911-1913).

G. DAWES HICKS, M.A., PH.D., LLT.D. (President, 1913-1914).

RIGHT HON. THE EARL OF BALFOUR, O.M., K.G., LL.D., F.R.S., F.B.A.
(President, 1914-1915).

H. WILDON CARR, D.LITT. (President, 1915-1918).

G. E. MOORE, Sc.D., LL.D., F.B.A. (President, 1918-1919).

JAMES WARD, Sc.D., LL.D., F.B.A. (President, 1919-1920).

VERY REV. W. R. INGE, D.D. (President, 1920-1921).

F. C. S. SCHILLER, M.A., D.Sc. (President, 1921-1922).

A. N. WHITEHEAD, D.Sc., LL.D., F.R.S. (President, 1922-23).

T. PERCY NUNN, M.A., D.Sc. (President, 1923-24).

HONORARY SECRETARY.

Mr. A. HOWARD HANNAY,
23, Thurlow Road, Hampstead, N.W.3.

TREASURER.

Dr. F. W. THOMAS.
6, Granville Road, Sevenoaks.

LIBRARIAN.

Miss MARGARET PUNNETT,
London Day Training College, Southampton Row, W.C.1.

EDITOR.

Prof. H. WILDON CARR,
107, Church Street, Chelsea, S.W. 3.

EXECUTIVE COMMITTEE.

Mr. GERALD CATOR.

Mr. G. R. S. MEAD.

Mr. C. E. M. JOAD.

Miss H. D. OAKELEY.

Rev. W. R. MATTHEWS.

Miss MAY SINCLAIR.

CORRESPONDING MEMBERS.

- Prof. J. MARK BALDWIN, c/o Harris Forbes & Co., 56, William Street,
New York.
HENRI BERGSON, 32, Rue Vital, Paris.
Prof. J. M. CATTELL, Garrison, New York.
Senator BENEDETTO CROCE, Trinità Maggiore 12, Naples.
Prof. JOHN DEWEY, Columbia University, New York.
M. H. DZIEWICKI, 11, Szczępanąka, Cracow, Poland.
Prof. HARALD HÖFFDING, Carlsberg, Copenhagen.
Prof. EDMUND HUSSERL, 40, Loretto-Strasse, Freiburg-in-Baden.
Prof. E. B. TITCHENER, Cornell University, Ithaca, New York.

MEMBERS.

Elected.

1912. Prof. S. S. A. ACHARYA, M.A., Gaurisankar-Sæter, Alvdal, Norway.
1915. DOUGLAS AINSLIE, B.A., Athenæum Club, S.W. 1.
1885. Prof. S. ALEXANDER, M.A., LL.D., F.B.A., *Vice-President*, 24, Brunswick Road, Withington, Manchester.
1919. G. ANDERSON, M.A., 552, Lonsdale Street, Melbourne.
1924. Mrs. J. E. ALDERSON, M.A., Coquetdale House, Blyth, Northumberland.
1921. H. M. ANDREWS, 9, Harcourt House, Cavendish Square, W. 1.
1922. Rev. H. DOUGLAS ANTHONY, M.A., B.Sc., The College, Richmond, Surrey.
1899. Sir ROBERT ARMSTRONG-JONES, M.D., 8, Bramham Gardens, S.W. 5.
1913. Rev. FRANCIS AVELING, D.D., Ph.D., D.Sc., The Mission House, Brondesbury Park, N.W. 6.
1916. Prof. J. B. BAILLIE, M.A., D.Phil., Ladyhill, Bieldside, Aberdeenshire.
1908. Right Hon. The EARL OF BALFOUR, K.G., *Vice-President*, 4, Carlton Gardens, Pall Mall, S.W. 1.
1915. F. C. BARTLETT, B.A., Turfsoot, Storey's Way, Cambridge.
1919. ROBERT J. BARTLETT, St. Hilda's, Christchurch Avenue, N.W. 6.
1922. JOSEPH A. E. BATES, Directorate General of Post Shanghai.
1923. HELTON GODWIN BAYNES, M.D., 24, Campden Hill Square, W. 8.
1907. Mrs. MARGRIETA BEHR, M.A., 65, College Court, Hammersmith, W.
1913. Col. E. H. BETHELL, Beech Hill, Englefield Green, Surrey.
1888. H. W. BLUNT, M.A., 183, Woodstock Road, Oxford.
1913. Prof. A. BONUCCI, Perugia, Italy.
1921. Prof. J. R. BOODIN, M.A., Ph.D., Carleton College, Northfield, Minnesota, U.S.A.
1924. Rev. Canon G. H. BOX, M.A., D.D., King's College, Strand, W.C. 2.
1919. W. R. V. BRADE, B.A., 34, Kingsmead Road, Tulse Hill, S.W. 2.
1909. F. H. BRADLEY, O.M., M.A., LL.D. (Honorary Member), Merton College, Oxford.
1919. W. O. BRIGSTOCKE, B.A., 3, Regent Street, Dunstable.
1914. C. D. BROAD, M.A., D.Litt., Trinity College, Cambridge.
1889. Prof. J. BROUGH, LL.D., 12, Carlingford Road, Hampstead, N.W. 3.
1908. WILLIAM BROWN, D.Sc., M.D., 5, Norham Gardens, Oxford.

Elected.

1922. Prof. WM. ADAMS BROWN, Ph.D., D.D., 49, E. 80th Street, New York.
1919. J. BUTLER BURKE, M.A., Royal Societies Club, St. James's Street, S.W. 1.
1921. L. D. BURLING, 47, Parliament Street, S.W. 1.
1913. O. DELISLE BURNS, M.A., D.Lit., 3, Kents Grove, Hampstead, N.W. 3.
1906. Rev. Preb. A. CALDECOTT, M.A., D.D., D.Lit., Great Oakley Rectory, Harwich.
1920. Prof. MARY WHITON CALKINS, Wellesley College, Wellesley, Mass., U.S.A.
1918. Prof. E. T. CAMPAGNAC, M.A., Greengate, Dingle Lane, Liverpool.
1881. Prof. H. WILSON CARR, D.Lit., *Vice-President and Editor*, 107, Church Street, Chelsea, S.W. 3.
1921. WILLIAM CATMUR, 23, Terrace Road, South Hackney, E. 9.
1918. GERALD CATOR, 83D, Lexham Gardens, W. 8.
1923. W. S. CHANG, D.Phil., 74, High Street, Oxford.
1918. Prof. G. C. CHATTERJI, B.A., Central Training College, Lahore, India.
1924. V. G. CHILD, M.A., 34, Cartwright Gardens, W.C. 1.
1908. E. C. CHILDS, M.A., 6, Cambridge Park, Redland, Bristol.
1924. JAROSLAV CISAŘ, Ph.D., Czechoslovakia Legation, 8, Grosvenor Place, W. 1.
1918. Miss M. E. CLARKE, M.A., 39, West Street, Northampton, Mass., U.S.A.
1920. Miss H. CLERGUE, Albemarle Club, 37, Dover Street, W. 1.
1912. Prof. ALBERT A. COCK, B.A., University College, Southampton.
1907. F. J. O. CODDINGTON, M.A., LL.M., 42, Bank Street, Sheffield.
1895. STANTON COIT, Ph.D., 30, Hyde Park Gate, S.W. 7.
1913. G. D. H. COLE, M.A., 18, Thurlow Road, Hampstead, N.W. 3.
1921. R. G. COLLINGWOOD, M.A., Pembroke College, Oxford.
1920. F. C. CONSTABLE, M.A., Grenville, Lansdown, Bath.
1920. F. C. COULTER, M.A., Royal Societies Club, St. James's Street, S.W. 1.
1922. F. G. CROOKSHANK, M.D., 41, Wimpole Street, W. 1.
1921. Mrs. P. M. CROTHWAITE, Highfield, King's Langley.
1917. Right Rev. C. F. D'ARCY, D.D., Archbishop of Armagh, Primate of Ireland, The Palace, Armagh.
1920. Prof. S. N. DASGUPTA, M.A., Ph.D., Chittagong College, India.
1912. Prof. WILLIAM L. DAVIDSON, M.A., LL.D., 8, Queen's Gardens, Aberdeen.
1916. Rev. A. E. DAVIES, M.A., 5, South Parade, Whitley Bay, near Newcastle-on-Tyne.
1923. Prof. W. G. DE BURGIL, M.A., 2, Southern Hill, Reading.
1922. A. O. DELO-DOSUMER, M.A.
1896. E. T. DIXON, M.A., Billy Dun, Half-Way Tree, Jamaica.
1924. Judge H. C. DOWDALL, M.A., Melfort Cottage, Boar's Hill, Oxford.
1922. Rev. W. J. DOWNES, B.A., B.D., The Manse, The Drive, Tonbridge.
1924. Rev. RICHARD DOWNNEY, D.D., The Mission House, Brondesbury, N.W. 2.
1918. Rev. JOHN DRAKE, M.A., B.D., Serampore College, Bengal.
1918. JAMES DREYER, M.A., B.Sc., D.Phil., Rosclea, Gullane, East Lothian.

Elected.

1911. Mrs. N. A. DUDDINGTON, M.A., 13, Carlton Terrace, Child's Hill, N.W. 2.
1890. Prof. W. R. DUNSTAN, M.A., LL.D., F.R.S. (Honorary Member), 38, Cranley Gardens, S.W. 7.
1922. Rev. GEORGE EAYES, Ph.D., 39, Castleton Road, Walthamstow, E. 17.
1910. Miss BEATRICE EDGEELL, M.A., Ph.D., 15, Lyon Road, Harrow.
1923. IRWIN EDMAN, Ph.D., Columbia University, New York.
1917. Rev. A. E. ELDER, The Vicarage, Otford, near Sevenoaks.
1921. GILBERT ELLIOT, M.A., 10, Regents Park Terrace, N.W. 1.
1919. Prof. J. H. FARLEY, Lawrence College, Appleton, Wisconsin, U.S.A.
1920. Prof. A. S. FERGUSON, M.A., Armstrong College, Newcastle-on-Tyne.
1912. G. C. FIELD, M.A., D.Sc., The University, Liverpool.
1914. Miss MARY FLETCHER, 13, Ladbroke Terrace, W. 11.
1920. Miss I. FLINN, Ormond College, Melbourne.
1919. Mrs. FORMAN, 18, Drayton Gardens, S.W. 10.
1922. Miss E. MARGERY FOX, County School for Girls, Beckenham.
1918. Miss MADGE FULLER, 180, Holland Road, W. 14.
1923. Miss RAINA GANNA, Ph.D., Sofia, Bulgaria.
1919. E. GARCKE, Ditton House, near Maidenhead.
1916. Miss H. GAVIN, 27, Belsize Park, N.W. 3.
1919. Rev. W. F. GEIKIE-COBB, D.D., 26, Drayton Court, S.W. 10.
1897. Prof. W. R. BOYCE GIBSON, M.A., D.Sc., Lichfield, Wallace Avenue, Terraces, Melbourne. *21 - 2015 - 7 Hall, not*
1918. Mrs. MARY H. GIBSON-SMITH, Ph.D., 13, Fox Hill, Selly Oak, Birmingham.
1911. Prof. C. M. GILLESPIE, M.A., The University, Leeds.
1913. MORRIS GINSBERG, M.A., D.Lit., 37, Great James Street, W.C. 1.
1900. G. F. GOLDSBROUGH, M.D., 125, Herne Hill, S.E. 24.
1912. Prof. FRANK GRANGER, D.Litt., 37, Lueknow Drive, Nottingham.
1920. THOMAS GREENWOOD M.A., Ph.D., L. ès L., c/o R. Geographical Society, S.W. 7.
1921. D. M. GREIG, M.D., 2, Ashley Place, S.W. 1.
1921. J. Y. T. GREIG, M.A., Armstrong College, Newcastle-on-Tyne.
1918. ALBERT GRESSWELL, M.A., M.D., Louth, Lincolnshire.
1921. Prof. DANIEL GRIFFITHS, Granville House, Pontypool, Mon.
1922. Prof. J. A. GUNN, M.A., Ph.D., The University, Melbourne.
1922. Rev. Canon J. GURNHILL, B.D., The Priory, Minster Yard, Lincoln.
1920. M. A. HAFEEZ, M.A., 9/2, Kyd Street, Calcutta.
1912. J. C. HAGUE, M.A., London Day Training College, Southampton Row, W.C. 1.
1883. Right Hon. Viscount HALDANE OF CLOAN, O.M., K.T., LL.D., F.R.S., F.B.A., *vice-President*, 28, Queen Anne's Gate, S.W. 1.
1917. J. S. HALDANE, M.A., LL.D., F.R.S., Cherwell, Oxford.
1915. Miss S. ELIZABETH HALL, 6, Prince Arthur Road, N.W. 3.
1921. H. F. HALLETT, M.A., The University, Leeds.
1920. Miss M. HAMMOND, The University, Birmingham.

Elected.

1920. A. H. HANNAY, B.A., *Honorary Secretary*, 28, Thurlow Road, Hampstead, N.W. 3.
1919. Rev. R. HANSON, M.A., B.D., St. Botolph Without, Aldersgate, E.C.
1913. R. P. HARDIE, M.A., 13, Palmerston Road, Edinburgh.
1922. O. F. A. HARR, Backwell Down, Flax Burton, Somerset.
1923. Miss K. HARR, 3, Albany Terrace, N.W. 1.
1923. J. H. HARLEY, M.A., 59, Parliament Hill, N.W. 3.
1924. G. W. HARRIS, B.A., 3, Rathbone Place, W. 1.
1921. O. R. S. HARRIS, M.A., All Souls' College, Oxford.
1923. A. R. W. HARRISON, M.A., 3, Little Dean's Yard, Westminster.
1919. Mrs. E. THURLOW HARRISON, St. Valérie, Sevenoaks.
1922. J. R. HART, Woodbury, Biggin Hall, Norwood, S.E. 19.
1918. Miss VICTORIA HAZLITT, M.A., Bedford College, N.W. 1.
1918. A. E. HEATH, M.A., 22, Abercromby Square, Liverpool.
1922. G. F. HEMENS, B.Sc., 69, Royal Hospital Road, Chelsea, S.W. 3.
1923. Miss M. T. B. HESLOP, 27, Belsize Park, N.W. 3.
1915. Prof. H. J. W. HETHERINGTON, M.A., The University, Glasgow.
1890. Prof. G. DAWES HICKS, M.A., Ph.D., Litt.D., *Vice-President*, 9, Cranmer Road, Cambridge.
1919. Rev. EDWARD W. HIRST, Lynton Villa, The Firs, Bowdon, Cheshire.
1923. Prof. W. ERNEST HOCKING, 16, Quincy Street, Cambridge, Mass.
1923. Mrs. HODSON, 11, Lincoln's Inn Fields, W.C. 2.
1912. Prof. R. F. A. HORNÉ, M.A., B.Sc., University of the Witwatersrand, Johannesburg, S.A.
1918. MICHEL G. HOLBAN, British Empire Club, St. James's Square, S.W. 1.
1916. S. E. HOOPER, M.A., The Cottage, Cookham Dene, Berks.
1923. RANDOLPH W. HUGHES, M.A., King's College, Strand, W.C. 2.
1916. Very Rev. Dean W. R. INGE, D.D., *Vice-President*, The Deanery, St. Paul's, E.C. 4.
1913. ALEXANDER C. IONIDES, jun., 34, Porchester Terrace, W. 2.
1924. Mrs. H. B. IRVING, 18, Cumberland Terrace, Regent's Park, N.W. 1.
1919. N. ISAACS, 53, Hunter Street, Brunswick Square, W.C. 1.
1911. Principal L. P. JACKS, M.A., LL.D., D.D., Shotover Edge, Headington, Oxford.
1923. E. F. JACOB, M.A., 54, South Eaton Place, S.W. 1.
1918. Rev. J. G. JAMES, M.A., D.Lit., Brynhyfryd, Andover Road, Southsea.
1921. Prof. G. B. JEFFERY, M.A., D.Sc., 365, Pinner Road, Harrow.
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 1921. JOHN ARTHUR LAW, 29, Southampton Buildings, W.C. 2.
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 1918. Captain A. E. I. LEGGE, The Athenaeum, Pall Mall, S.W. 1.
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 1923. ISRAEL LEVINE, M.A., D.Litt., University College, Exeter.
 1908. Prof. A. D. LINDSAY, M.A., *President*, Balliol College, Oxford.
 1912. Prof. THOMAS LOVEDAY, M.A., The University, Bristol.
 1924. Prof. J. LOEWENBERG, University of California, Berkeley, California, U.S.A.
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 1921. Miss JULIA LYON, B.Sc., 18, Mecklenburgh Square, W.C. 1.
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 1916. Prof. J. S. MACKENZIE, Litt.D., 56, Bassett Road, North Kensington, S.W. 10.
 1910. Sir W. LESLIE MACKENZIE, M.A., M.D., 14, Belgrave Place, Edinburgh.
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 1918. Prof. A. MAIR, M.A., 26, Parkfield Road, Princes Park, Liverpool.
 1919. Miss JESSIE A. MALLETT, 29, Launceston Place, W. 8.
 1919. B. K. MALLIK, B.A., 22, Farndon Road, Oxford.
 1922. W. H. O'N. MANNING, M.A., Arlion, Ballyholme, Bangor, Co. Down.
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 1918. Miss MARGARET MCFARLANE, B.A., 50, Southwood Lane, Highgate.
 1918. WM. MONTGOMERY MCGOVERN, Ph.D., School of Oriental Studies, Finsbury Circus, E.C. 2.
 1899. J. LEWIS MCINTYRE, D.Sc., Abbotville, Cults, N.B.
 1921. J. C. MCKERROW, 34, Cartwright Gardens, W.C. 1.
 1914. G. R. S. MEAD, B.A., 27, Clareville Grove, S.W. 7.
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 1919. HERBERT J. PATON, M.A., Queen's College, Oxford.
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 1922. CAMILLO PELLIZZI, LL.D., 24, Pembroke Crescent, W. 11.
 1921. Rev. RICHARD PHILLIPS, M.A., D.Ph., D.D., St. John's Seminary, Womersley, Guildford.
 1916. W. A. PICKARD-CAMBRIDGE, M.A., Worcester College, Oxford.
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 1923. Mrs. PORTAL, Bero Hill, Whitechurch, Hants.
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 1922. HANS PRESSBURGER, Ph.D., University College, W.C. 1.
 1913. Prof. A. S. PRINGLE-PATTISON, LL.D., D.C.L., F.B.A., 16, Church Hill, Edinburgh.
 1916. Miss M. PUNNETT, B.A., *Librarian*, London Day Training College, Southampton Row, W.C. 1.
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 1922. M. B. RAY, M.D., 11, Seymour Street, W. 1.
 1922. LOUIS ARNAUD REID, M.A., Ph.D., 8, Marine Terrace, Aberystwyth.
 1918. Prof. H. MAURICE RELTON, D.D., The Vicarage, Isleworth.
 1918. C. A. RICHARDSON, M.A., Willow House, Whalley, Blackburn.
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1924. Mrs. SINGER, 5, North Grove, Highgate Village, N. 6.
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 1896. Prof. R. M. WENLEY, D.Phil., LL.D., 509, East Madison Street, Ann Arbor, Mich.
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 1910. Miss A. L. S. WISE, 16, West Kensington Gardens, W. 14.
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 1919. Rev. A. WOOD, D.D., 103, New Road, Woolwich.
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The Aristotelian Society.

FORTY-FIFTH SESSION, 1923-1924.

The Opening Meeting of the Session will be held in the Conference Hall of the University of London Club, 21, Gower Street, W.C. 1, on November 5th, 1923, at 8 p.m.

The Presidential Address by Professor T. Percy Nunn, "Scientific Objects and Common-Sense Things," is enclosed. The Address will be followed by a discussion.

Members are reminded that the Subscription, one guinea, is due at the opening of the Session. Those who have not signed bankers orders are requested to send their subscription to the Treasurer, Dr. F. W. Thomas, 6, Granville Road, Sevenoaks.

The Society's Library consists of a small number of books, the gift at various times of Members of the Society, and also of exchanges of foreign philosophical journals. There are no books of reference. The books and journals are at the London Day Training College, Southampton Row, W.C. 1. The Librarian, Miss Punnett, will arrange to lend out the books and journals to any Member who applies to her. Members who wish volumes to be sent to them are expected to defray the expense of postage.

Any Member who would prefer to receive the annual bound volume of the Proceedings, instead of the unbound papers as issued with the case for binding, should instruct the Honorary Secretary at the beginning of the Session.

H. WILDON CARR,

Honorary Secretary.

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